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# ANNUAL REPORTS

OF THE

# DEPARTMENT OF THE INTERIOR

FOR THE

FISCAL YEAR ENDED JUNE 30, 1906

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GOVERNOR OF HAWAII  
BOARD OF INDIAN COMMISSIONERS

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WASHINGTON  
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REPORT OF THE GOVERNOR OF HAWAII.

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# REPORT OF THE GOVERNOR OF THE TERRITORY OF HAWAII.

EXECUTIVE CHAMBER,  
*Honolulu, Hawaii, October 31, 1906.*

SIR: I have the honor to submit herewith my annual report on Hawaiian affairs for 1906:

## GENERAL SUBJECTS.

### EDUCATIONAL.

Among the most important problems in Hawaii is that of education, and the article contributed by Mr. Babbitt, superintendent of public instruction, is of special importance. It indicates two pressing needs of the public schools, namely, increased accommodations for pupils and better pay for teachers. At the end of the fiscal year there was an attendance of more than 16,000 in the public schools and of more than 5,000 in the private schools (including the kindergartens). Notwithstanding the great relief afforded by the private schools to the situation, there is still much congestion in the crowded districts, and there are frequent calls for schools in the newer settlements not yet supplied with accommodations. From data furnished by the educational department not included in the superintendent's article, the following table, relating to public school accommodations, is compiled. "Number of schools" does not refer to buildings, for many schools have groups of structures, and in many country sections there are detached cottages for teachers. The values given cover all buildings in each case. Lahainaluna, on Maui, is the leading school in the Territory which affords industrial as well as ordinary education, other than the reformatory institutions for girls and boys on Oahu, and its group includes printing, carpenter, and blacksmith shops, besides cow shed and barn.

Under the head of values the figures are derived from contract prices with regard to recently erected structures and from estimated present valuations in the case of older buildings. There are five schools in Honolulu having structures of an average value of \$36,579 each, all but one of them being modern edifices of fireproof materials.

Here is the table to which reference has been made:

County.	Schools.	Rooms.	Average rooms.	Value of build-ings.
Hawaii.....	60	144	2.4	\$142,440
Maui.....	42	72	1.714	141,994
Oahu.....	33	179	5.424	294,105
Kauai.....	17	53	3.117	54,612
Total.....	152	448	3.163	633,151

These figures would show an average of 106 pupils to a school and of 36 to a room. The most costly building on Oahu is that of the Normal School, valued at \$48,781, the next being that of the Royal School, a splendid structure of 21 rooms, valued at \$42,515. On Hawaii, the Hilo Union School has the highest valued building, at \$12,100, but a handsome structure for the newly established Hilo High School is under construction. Maui has Lahainaluna, with buildings valued at \$41,959, with Wailuku High School second in new buildings, worth \$24,845. Kauai's best group is at Lihue, the county town, schoolhouse and cottages being valued at \$8,185. Though without many pretentious buildings, Kauai has more adequate accommodations, for the number of children, than any other county.

Much satisfaction should be taken from the superintendent's statement about the interest that is being taken by teachers and pupils in the beautifying of school grounds. It is a matter of gratification, too, that manual training steadily advances. Mr. Babbitt touches upon a matter that has been much discussed of late years when he declares that "the need of an agricultural and industrial college is becoming more and more apparent." Lahainaluna school has attained a creditable status in agricultural and industrial training. This is the oldest public school in the Hawaiian Islands, having been started by the earliest American missionaries more than seventy years ago and coming, in later times, under the public school system. Great results have been obtained from practical farming by the boys' industrial school at Waialeale, Oahu, which has taken the place of a reformatory school in Honolulu, but with larger purposes and a greater scope. Upon the lower lands of the school reservation by the seacoast the boys take care of livestock and raise from the soil a large proportion of the school's food supply, even a surplus of some products, besides growing sugar cane for sale under contract to a neighboring sugar mill. Just now the school force is about to begin the cultivation of Irish potatoes, pineapples, corn, etc., upon an extensive upland section. The boys have helped, with their labor in various trades, to finish the buildings of the school, besides making a goodly portion of the furniture and fixtures. When so much can be accomplished with city street arabs, under detention for their own good, the possibilities of success for an agricultural and industrial college, filled with voluntary students, ought not to be problematical other than with respect to means for its establishment. Agriculture is practically the exclusive basis of Hawaii's wealth, and so long as the rising generation, in large proportion, is not being bred to cultivation of the soil, thus far a serious lack in the educational system will be perpetuated.

Mr. Babbitt lays stress upon the fact that there have been decreases in the school attendance of children of pure Hawaiian and American blood—more than 58 per cent of the former and more than 40 per cent of the latter—while the attendance of Japanese children has increased more than 58 per cent. Possibly the decreases may be partly accounted for by the necessity of dispensing with truant officers, because of lack of funds. As to American children, no doubt the diminished attendance is considerably due to the departure of many American families upon the ending of a period of great building activity. There is nothing to deplore in the increase of Japanese children. The Japanese are here probably in large proportion to remain. Their natural increase has been very great, and, as eight

years have elapsed since annexation, a large number of the Japanese children now crowding into our schools have been born under the American flag. When these reach maturity, they will have the right of claiming American citizenship. It is therefore most important that they should have full opportunity of becoming equipped with the knowledge and habits of thought requisite to good American citizenship. Apart from that consideration it must be conceded that it is the inalienable privilege of every child under protection of the flag to enjoy the benefits of that public school system which is one of the chief glories of the American Commonwealth and which, moreover, Hawaii took as an ideal long before admission and continues, as a part of the Union, with best endeavors to maintain.

## ECONOMIC CONDITIONS

Commercially, it has been a fairly but not particularly prosperous year for Hawaii. In the matter of sugar, the chief staple, there was a combination of decreased production and diminished prices. Thus, whereas the value of shipments fell short of that of the year before by \$9,616,721, had the average prices (for raw and refined) of 1905 continued the deficiency in valuation would have been less than \$3,500,000. So the low condition of the market is responsible for more than \$6,000,000 of the deficiency. Refined sugar is now only for the second year on Hawaii's list of exports, there being but one plantation on the islands turning out the article from its factory. The product found a ready market on the mainland from the first, and the second year's output shows an increase of more than 6,400 tons. Here is a comparative statement of the shipments of sugar for the past two years:

	1905.			1906.		
	Pounds.	Price per pound.	Value.	Pounds.	Price per pound.	Value.
Raw.....	811,603,329	<i>Cents.</i> 4.19	\$33,946,040	712,560,997	3.35	\$23,840,803
Refined.....	21,118,308	5.52	1,166,108	34,041,640	4.86	1,654,624
Total.....	832,721,637		35,112,148	746,602,637		25,495,427
Decrease.....				86,119,000		9,616,721

Being, on the basis of the 1900 census, a falling off of \$62.44 per capita in the Territory's increment of wealth from its chief industry.

*Quantity and value of sugar exported for ten years.*

Year ended June 30—	Pounds.	Value.	Price per pound.
			<i>Cents.</i>
1897.....	431,196,980	\$13,164,379	3.05
1898.....	499,766,798	16,660,109	3.33
1899.....	462,299,880	17,287,683	3.72
1900.....	504,713,105	20,392,150	4.05
1901.....	690,877,934	27,093,863	3.92
1902.....	720,553,357	24,147,884	3.35
1903.....	774,825,420	25,665,733	3.31
1904.....	736,491,992	24,359,385	3.30
1905 (raw).....	811,603,329	33,946,040	4.19
1905 (refined).....	21,118,308	1,166,108	5.52
1906 (raw).....	712,560,997	23,840,803	3.35
1906 (refined).....	34,041,640	1,654,624	4.86



Through the courtesy of the Department of Commerce and Labor, Bureau of Statistics, the following tables of Hawaii's trade are presented:

*Principal domestic articles shipped from the United States to the District of Hawaii, with values, for the fiscal year ended June 30, 1906.*

Domestic articles.	Value.	Domestic articles.	Value.
Agricultural implements.....	\$22,635	Naval stores.....	\$10,991
Aluminum, and manufactures of....	9,587	Oils:	
Animals.....	115,197	Animal.....	1,281
Books, maps, engravings, etc.....	58,037	Mineral.....	1,238,530
Brass, and manufactures of.....	24,366	Vegetable.....	31,181
Breadstuffs.....	1,472,230	Paints, pigments, and colors.....	97,521
Cars, carriages, etc., and parts of....	101,721	Paper, and manufactures of.....	176,705
Automobiles, and parts of.....	107,266	Plated ware.....	24,859
Cement.....	22,133	Provisions, meat, and dairy products	587,334
Chemicals, drugs, and dyes.....	213,245	Rice.....	164,863
Clocks and watches.....	14,455	Silk, manufactures of.....	39,539
Coal and coke.....	59,379	Soap.....	87,062
Coffee.....	11,029	Spirits.....	146,784
Copper, and manufactures of.....	29,306	Malt liquors.....	85,053
Cork, manufactures of.....	10,571	Wines.....	309,118
Cotton, manufactures of.....	872,332	Straw and palm leaf, manufactures	
Fertilizers.....	611,583	of.....	28,864
Fibers and grasses, manufactures of..	101,843	Sugar and molasses.....	61,542
Fish.....	247,954	Candy and confectionery.....	31,948
Fruits and nuts.....	138,495	Tin, manufactures of.....	25,352
Glass and glassware.....	88,305	Tobacco, manufactures of.....	494,818
Gunpowder and other explosives.....	78,502	Toys.....	18,020
Hay.....	132,123	Trunks and traveling bags.....	15,575
India rubber, manufactures of.....	94,614	Vegetables.....	157,370
Instruments, scientific.....	71,241	Wood:	
Iron and steel, and manufactures of..	1,380,414	Lumber.....	625,218
Jewelry.....	99,796	Manufactures of.....	189,032
Lead and manufactures of.....	17,622	Wool, manufactures of.....	192,852
Leather, and manufactures of.....	307,848	All other articles.....	274,848
Lime.....	81,590		
Matches.....	14,280		
Musical instruments.....	45,196		
		Total.....	11,771,155

*Customs districts from which shipped.*

District.	Value.	District.	Value.
San Francisco, Cal.....	\$10,232,370	Los Angeles, Cal.....	\$46,300
Puget Sound, Wash.....	1,266,367	Willamette, Oreg.....	28,000
New York, N. Y.....	132,156	Philadelphia, Pa.....	18,420
Humboldt, Cal.....	47,542		

*Shipments of domestic merchandise from Hawaii to the mainland of the United States for the fiscal year ended June 30, 1906.*

Articles.	Pounds.	Value.
Coffee, pounds.....	2,147,279	\$248,618
Fruits, preserved.....		155,103
Green, ripe, dried.....		131,806
Other.....		694
Hides and skins.....	1,136,994	126,425
Honey.....		34,048
Iron and steel, and manufactures of..		67,464
Jewelry.....		18,916
Leather, manufactures of.....		22,116
Rice.....	5,739,500	223,012
Sugar:		
Raw.....	712,560,997	23,840,803
Refined.....	34,041,640	1,654,624
Other.....		187
Tallow.....	178,942	7,046
Wool.....	313,366	45,883
All other articles.....		273,718
Total.....		26,850,463

*Shipments of domestic gold and silver between the United States and Hawaii.<sup>a</sup>*

Gold and silver.	Twelve months ended June 30, 1906.	
	From United States to Hawaii.	From Hawaii to United States.
Gold:		
Bullion, refined.....	\$1,050	.....
Coin.....	326,560	\$50,000
Silver, coin.....	347	5,312
Total.....	327,957	55,312

<sup>a</sup> Carried in American steam vessels.

*Total value of all articles imported from and exported to foreign countries for the fiscal year ended June 30, 1906.*

Country.	Imports.	Exports.	Country.	Imports.	Exports.
Belgium.....	\$6,806	.....	West Indies, British.....	\$92	.....
France.....	9,732	.....	Chile.....	448,608	.....
Germany.....	171,497	\$391	China.....	3,984	\$2,778
Italy.....	1,366	.....	East Indies.....	415,131	.....
Netherlands.....	3,429	.....	Hongkong.....	245,214	2,004
Norway.....	208	.....	Japan.....	1,247,470	20,080
Portugal.....	484	.....	Korea.....	20	.....
Spain.....	3,850	.....	Australasia.....	262,594	8,348
Sweden.....	3	.....	Oceania.....	1,182	742
United Kingdom.....	424,976	5,512	Philippines.....	6,051	2,155
Canada.....	22,501	15,303	Total.....	3,275,212	57,313
Panama.....	12	.....	Year ended June 30, 1905.....	3,014,964	59,541
Peru.....	2	.....			

*Tonnage movement in trade with Hawaii.*

## NUMBER AND TONNAGE OF VESSELS CLEARED FROM THE UNITED STATES TO HAWAII.

Vessels and customs districts.	Twelve months ended June 30, 1906.	
	Number.	Tons.
American:		
Sailing.....	164	149,099
Steam.....	93	232,148
Total.....	257	381,247
From New York, N. Y.....	1	961
From Philadelphia, Pa.....	2	4,404
From Humboldt, Cal.....	3	899
From Oregon, Oreg.....	3	2,576
From Puget Sound, Wash.....	59	91,585
From San Francisco, Cal.....	188	279,006
From Willamette, Oreg.....	1	1,816

## NUMBER AND TONNAGE OF VESSELS CLEARED FROM HAWAII TO THE UNITED STATES.

American:		
Sailing.....	224	229,849
Steam.....	114	378,974
Total.....	338	608,823
Foreign:		
Sailing.....	7	10,443
Steam.....	1	1,284
Total.....	8	11,727
American and foreign:		
Sailing.....	231	240,292
Steam.....	115	380,258
Total.....	346	620,550

For many years rice has been second in Hawaiian domestic exports, while also supplying a considerable home demand. Much was consumed on the sugar plantations when Chinese formed a great proportion of the labor, and since Japanese have come to predominate there the same is true of them. But the latter prefer the rice grown in Japan, and next to that Louisiana rice, over the Hawaiian article. They say that the island rice does not keep palatable after cooling as well as the others, one reason given for this being lack of an essential oil due to excessive cropping. Two crops a year are raised in Hawaiian rice fields against one in Japan and the Southern States. Here the cultivation of rice has always been in Chinese hands, and the diminution of their numbers accounts for the decline of this export. Rice shipments, however, show a goodly increase for the past over the previous year.

A very gratifying feature of the commercial statistics for two or three years past has consisted of increased shipments of various domestic products, some of them being entirely new in Hawaiian exports. Our most excellent coffee is gradually forging ahead in the mainland market. Honey shows a steady increase. Preserved fruits are making veritable strides in amount shipped, the particular staple thus far being pineapples. New pineapple-raising companies have been incorporated in the last year, while some of the older ones have enlarged their canning factories. Incidental to the pineapple industry, a large factory for the manufacture of cans has been started in Honolulu.

Under the auspices of the United States Experiment Station measures have been taken for the proper care and marketing of Hawaiian fresh fruits, with San Francisco as a distributing base, which it is confidently expected will put an end to difficulties wherewith this portion of Hawaii's export trade heretofore has been handicapped. An experiment made in sending packages of the more perishable of Hawaiian fruits to the governors of Washington, Oregon, Montana, Colorado, and Idaho, and to the representatives of commercial bodies in those States, has proved that markets far inland from the Pacific coast may be supplied with various of our luscious subtropical fruits in natural state and in perfect condition. Samples of fresh Hawaiian pineapples have been expressed even to Washington, D. C., and New York, arriving in prime condition.

One of the new products appearing in the trade statistics herewith is sisal fiber. Experts have pronounced the Hawaiian article to be of the very best. The sisal shrub thrives on lands that will produce few other growths of value as well as in good agricultural soil. There are considerable areas in the islands available for its production, and the only present hindrance to the rise of a large fiber industry here is the slowness of capital to grasp the opportunity. Another export that will appear in the returns within a few years is crude rubber. Several incorporated companies are now operating rubber plantations, a large area in the aggregate being under cultivation and the tree growths highly promising of good yields. Tobacco is also very likely soon to appear. Experiments made on a large scale by the Federal agricultural station management have produced tobaccos of excellent merchantable qualities, a considerable output of the experimental farm having been taken by a Seattle cigar manufactory. Expert tobacco planters have in the meantime taken up lands for raising the article.



Recently the tentative starting of a steamship line from Portland, Oreg., to Honolulu and Hilo has greatly inspired hopes of an extensive new market for our minor products. The commercial bodies of the three cities just named have taken up the matter of promoting trade between the northwest coast and the islands. Much is being said also about a mooted project of steamship communication between San Pedro, Cal., and Honolulu. This is regarded as a desirable tourist route. It would be in line with a vigorous campaign for attracting visitors and home seekers, which is being carried on by the Hawaii Promotion Committee, an organization at present supported by the merchants of Honolulu, but which has attained such public importance and appreciation that the two great political parties recommend, in their current election platforms, that it be maintained from the Territorial treasury. There is no gainsaying the statement that no other country upon the globe has superior attractions, either for summer or winter residence, to offer people who desire a respite from the extremes of heat and cold, which elsewhere are suffered. With its climatic advantages Hawaii also presents great scenic beauties, and withal it offers practically every modern auxiliary of human convenience and comfort.

There is a large internal commerce of which no mention is made in official trade returns. For the year ended June 30, 1906, the steamers of the Inter-Island Steam Navigation Company carried 52,269 passengers and approximately 306,641 tons of freight. The company has a fleet of fifteen or sixteen steamers, those upon the chief passenger routes being modernly equipped.

The large ocean freight carriers of the American-Hawaiian Steamship Company, plying between New York, the Isthmus of Tehuantepec, Honolulu, and Pacific coast ports, load sugar at Kahului on Maui, also sometimes at Hilo on Hawaii, as well as Honolulu. In this connection it may be said that the Hawaiian Commercial and Sugar Company is completing the construction of a breakwater at Kahului, which will make of the magnificent bay there a commodious and safe harbor.

Our needs are so insignificant compared with the great subjects before Congress, and our voice comes from such a distance, that little attention is paid to what the national legislators regard as merely local improvements. Thus it is that private enterprise has to perform here that which is done for every other community by public action. The hopes of the people were raised following annexation that the Federal Government would take hold of Hilo's harbor, and as the years roll by disappointment increases. There is a sign now, however, of some work being done, as a preliminary survey has just been made.

Hilo has a very considerable deep-sea commerce despite its disadvantage of undefended exposure to ocean swells. Besides the Portland line already mentioned, Hilo has direct steamship communication with San Francisco. With a breakwater it would undoubtedly become a great port of commerce. There and at adjacent landings now a large proportion of the sugar yield of the islands is transshipped to Honolulu for export. Direct shipments thence to market would be a great economy. No doubt the creation of a safe harbor at Hilo would vastly promote trade with both the mainland and foreign countries. While the construction of a breakwater there would be

a splendid local benefit, it would at the same time be more justly classified as a work of national importance. Moreover, it would really cost the United States nothing, for the revenues yielded by a good harbor at Hilo would quickly overtake the expenditure in its construction.

## POPULATION.

Taking as a basis of computation the figures of school attendance, there is shown an increase of 55,000, or about 35 $\frac{1}{2}$  per cent in the population of the Territory since last census. Between 1896 and 1900 the increase in population was 44,981, or 41.2 per cent. The estimate of population on June 30, 1906, based on the ratio of school enrollment to population in 1900, is shown in the following table:

Islands.	School attendance.		Population.		
	1900.	1906.	Census, 1900.	Estimate, 1906.	Increase.
Hawaii.....	4,425	5,686	46,843	60,192	13,349
Mauī, etc.....	2,806	4,001	27,920	39,810	11,890
Oahu.....	6,615	9,199	58,504	81,357	22,853
Kauai.....	1,691	2,257	20,734	27,673	6,939
Total.....	15,537	21,143	154,001	209,032	55,031

## REGISTRATION OF VOTERS.

Vitally related to the population is the numerical status of the electorate. It may be calculated from the following statistics of registration and voting that the ratio of increase of voters has been considerably less than that of school enrollment increase. While the increase on the school rolls for six years has been 36 per cent, that on the electoral registers, taking the two years below compared as a basis, would be only about 20 per cent for a like period. So, if the increase of voters were taken as the basis for an estimate of the population, it would show a population to-day of but 184,662, or an increase of less than 31,000. As, however, common observation and knowledge is convincing of the fact that the proportion of children arriving at school age in the Territory for several years past has been far in excess of the proportion of citizens arriving at voting age and of persons eligible for the franchise arriving from outside combined, it is safe to choose the school rather than the electoral statistics as a basis for estimating the population.

As between 1902 and 1904 the increase of registered voters has been 837; taking such as a normal vote would give an increase in six years of 2,501. The following tables give registration and voting figures for 1902 and 1904, those for voting being imperfect except in the vote cast for Delegate to Congress. Districts are those for the election of representatives to the Territorial legislature:



District.	Registration by districts.		Number of votes cast.	Vote for Delegate.	
	1902.	1904.		1902.	1904.
First.....	1,546	1,614	1,478	1,431	1,448
Second.....	1,450	1,533	1,384	1,315	1,305
Third.....	2,205	2,641	2,034	1,913	2,310
Fourth.....	3,382	3,517	3,278	3,024	3,185
Fifth.....	2,991	3,109	2,829	2,702	2,807
Sixth.....	1,038	1,035	1,002	941	935
Total.....	12,612	13,449	12,005	11,326	11,990

## FISHERIES.

The ownership by private individuals of exclusive fishing rights in the sea waters adjoining the islands of this Territory commands immediate attention and consideration. Former reports are indicative of the distinct phases which this subject has assumed by reason of the provisions of the organic act recognizing vested rights and providing a method for their establishment and condemnation. But subsequent judicial decisions have had the effect of eliminating the question as to what were vested rights within the meaning of section 95 of the act. And there now alone remains the consideration of ways and means of their condemnation and acquisition by the Territory.

It would not be amiss here to give a brief résumé of the cause and effect of sections 95 and 96 of the organic act

In 1839 Kamehameha III took the fishing grounds from Hawaii to Kauai and distributed them—those named without the coral reef and the ocean beyond to the people, those “from the coral reef to the sea beach to the landlords and for the tenants of their respective lands and not for others.” In 1849, the monarchy being then constitutional, an act was passed, the first section of which provided that the fishing grounds outside the reef should be free to the people, while the fishing ground from the reef to the beach or where there were no reefs for 1 mile seaward, should in law be considered private property of the landlords whose lands by ancient regulation belonged to the same, in the possession of which private fisheries said landlord should not be molested.

The civil code of 1859 repeated these early enactments in nearly the same words and there was a later repetition in the penal laws of 1897.

This law was in force and effect when the organic act became effective as to the Territory.

Section 95 repealed the laws conferring exclusive fishing rights in the sea waters of the Territory subject to vested rights. Section 96 made provision for the establishment of vested rights by the filing of a petition in a circuit court of the Territory setting forth the claim to such fishing right, said petition to be filed within two years after the taking effect of the act. The latter portion of the section provided for the condemnation of such fishing rights as might be established and the making of compensation therefor by the Territory.

Within the time limited, 82 claims were filed in the appropriate courts. Two cases were typical of the character of claims presented—Samuel M. Damon *v.* The Territory of Hawaii and Joseph O. Carter

et al, trustees under the will of B. P. Bishop, deceased, *v.* The Territory of Hawaii. In the first case the plaintiff based his claim upon the statutes hereinbefore mentioned and also a royal patent grant from the king. This patent described certain land conveyed by metes and bounds, the granting clause concluding with the words: "There is also attached to this land a fishing right in the adjoining sea, which is bounded as follows," giving boundaries. The habendum clause was: "To have and to hold the above granted land." The plaintiffs in the Carter case based their claim not upon words of grant in a royal patent but upon the statutes already referred to, as a right pertinent to the land by prescription and ancient Hawaiian custom.

The supreme court of the Territory, in the Carter case, held that the plaintiffs could not base any claim to the fishery on ancient custom or prescription; that the fishery was not appurtenant to the land and that the statutes did not confer a vested right, and, in the former case, upon the further ground that it did not appear from the patent that it was the intention of the grantor to convey the fishery and that the grant of exclusive right should not be presumed, the presumption being against the grant and in favor of the public.

The Supreme Court of the United States reversed the decision of the territorial supreme court in the Damon case, and since the last report took like action in the Carter case.

The practical result of these two decisions has been to dissolve all cases pending into mere proceedings to establish fisheries either by grant or prescription, and as fast as circumstances have permitted these cases have been disposed of. But few are pending. Upon the completion of this litigation there will have been established in the sea waters adjoining the islands of this Territory private and exclusive fisheries covering the greater portion of sea waters between the coral reefs and the shore.

By the common law the title and dominion of the sea and navigable rivers and arms of the sea within the territorial jurisdiction were in the king, who held the same for his subjects, who had a common right of fishery therein. The right of fishing in the open sea, like that of navigation, was a public right. Congress recognized that principle in its repeal of all laws pertaining to private and exclusive fisheries. It manifested its intention, except as to vested rights, to make fishing in the sea waters of this Territory a common right to citizens of the United States, for their free use and benefit. But Congress did not appreciate the extent to which vested rights in fisheries obtained in these islands. The early statutes fostered a custom far-reaching in its scope. Early land tenure concentrated landholdings in a few, and the right to sea fisheries appurtenant to the lands built up practically exclusive dominion over adjoining sea waters. One can only appreciate the extent of the 82 claims filed by an examination of the coast lines covered by the appended list of cases instituted for the purpose of establishing fishing rights. And the Supreme Court of the United States has declared these rights to be vested, while Congress has enacted that these private and exclusive rights to sea fisheries must be acquired by the Territory for the use of the citizens of the United States. The Territory, however, is without funds and without the ability to borrow the money in settlement of these claims. The organic law required that proceedings in condemnation must be instituted, but before these proceedings are commenced there must be the

available funds to satisfy whatever judgment in condemnation may be awarded against the Territory. We are at present without the information as to what the total value of these fisheries will amount to. Congressional assistance by proper appropriation of money is the only practical method by which citizens of the United States can secure for themselves that right which is preserved to all our citizens in common of States and Territories bordering on the sea—the free and open right of fishery.

*List of fishery cases.*

Cases..	Law number.	Case number.	Circuit.
J. O. Carter et al. v. Territory. Action to establish fishing right of Kaluaooou & Waiau.	5264	33	First.
J. O. Carter et al. v. Territory. Action to establish fishing right of Punaluu.	5263	31	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Kaluanui.	2558	19	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Heeia.	5255	13	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Maunaulaa.	5256	32	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Kapalama.	-----	20	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Paalaa & Kawailoa.	5261	31	Do.
Jomitila Paiko v. Territory. Action to establish fishing right of Kuliouou I.	5303	52	Do.
Anna Perry v. Territory. Action to establish fishing right of Wailupe.	5300	51	Do.
S. M. Damon v. Territory. Action to establish fishing right of Kaliaua.	5164	5	Do.
Victoria Ward v. Territory. Action to establish fishing right of Kukuluaeo.	5124	11	Do.
L. L. McCandless v. Territory. Action to establish fishing right of Ohikilolo.	5166	8	Do.
L. L. McCandless v. Territory. Action to establish fishing right of Pipiloa.	5316	78	Do.
H. H. Parker v. Territory. Action to establish fishing right of Kalokohamahou.	5298	50	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Wailawa.	5257	22	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Halawa, Ewa.	-----	16	Do.
J. O. Carter et al. v. Territory. Action to establish fishing right of Halawa, Molokai.	-----	24	Second.
J. O. Carter et al. v. Territory. Action to establish fishing right of Kaonohi.	5266	23	First.
J. O. Carter et al. v. Territory. Action to establish fishing right of Wailae-nui.	5259	21	Do.
James Campbell, Tr., v. Territory. Action to establish fishing right of Honouliuli.	5075	3	Do.
James Campbell, Tr., v. Territory. Action to establish fishing right of Kahuku.	5268	-----	Do.
Oahu R. & L. Co. v. Territory. Action to establish fishing right of Honouliuli and 8 others.	5285	43	Do.
B. Cartwright, Tr., v. Territory. Action to establish fishing right of Mahinui.	5294	47	Do.
W. G. Irwin v. Territory. Action to establish fishing right of Keana..	5175	1	Do.
John Defries v. Territory. Action to establish fishing right of Halawa.	5306	66	Do.
Solomon Kauai v. Territory. Action to establish fishing right of Keauau.	5252	40	Do.
M. P. Robinson v. Territory. Action to establish fishing right of Hoaeae.	5305	57	Do.
Heeia Agricultural Company v. Territory. Action to establish fishing right of Heeia.	5274	36	Do.
J. M. Monsarrat v. Territory. Action to establish fishing right of Kuliouou I.	5317	77	Do.
G. F. Roper v. Territory. Action to establish fishing right of Eli, at at Leahi.	5301	53	Do.
B. Cartwright, Tr., v. Territory. Action to establish fishing right of Mokapu.	5304	48	Do.
Catherine Stewart et al. v. Territory. Action to establish fishing right of Kahalui.	5310	56	Do.
Kapiolani Est., Ltd., v. Territory. Action to establish fishing right of Mikiola.	5241	14	Do.
Liliuokalani v. Territory. Action to establish fishing right of Hamohamo.	5308	61	Do.
Mary Lucas v. Territory. Action to establish fishing right of Niu....	5321	67	Do.
Henry Smith, Tr., v. Territory. Action to establish fishing right of Makaha.	5287	42	Do.



*List of fishery cases—Continued.*

Cases.	Law number.	Case number.	Circuit.
Kapiolani Est., Ltd., <i>v.</i> Territory. Action to establish fishing right of Mokauea.	5123	12	First.
Namie R. Rice <i>v.</i> Territory. Action to establish fishing right of Kaneohe.	5267	38	Do.
B. Cartwright, Tr., <i>v.</i> Territory. Action to establish fishing right of Halawa.	5294	41	Do.
Kaneohe Ranch Company <i>v.</i> Territory. Action to establish fishing right of Kaneohe.	5273	35	Do.
Mary E. Foster <i>v.</i> Territory. Action to establish fishing right of Kahana.	5269	37	Do.
S. M. Damon <i>v.</i> Territory. Action to establish fishing right of Moanalu.	5163	9	Do.
Grace Kahoalii <i>v.</i> Territory. Action to establish fishing right of Kauhola.	5307	59	Do.
John H Est., Ltd., <i>v.</i> Territory. Action to establish fishing right of Waipio.	5112	10	Do.
Emma M. Nakuina <i>v.</i> Territory. Action to establish fishing right of Honomuni.	.....	63	Second.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Waialae-iki.	5262	17	First.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing rights of Punaluu.	.....	31	Do.
H. P. Baldwin et al. <i>v.</i> Territory. Action to establish fishing right of Kaanapali.	.....	69	Second.
Hawaiian Com. & Sug. Co. <i>v.</i> Territory. Action to establish fishing right of Wailuku, Maalaea, Kihei.	.....	13	Do.
Hawaiian Com. & Sug. Co. <i>v.</i> Territory. Action to establish fishing right of Paukukalo et al.	.....	39	Do.
Wm. Shaw et al. <i>v.</i> Territory. Action to establish fishing right of Waiokama.	.....	75	Do.
C. A. Buchanan and wife <i>v.</i> Territory. Action to establish fishing right of Kupeke, Molokai.	.....	75	Do.
Kekuialono <i>v.</i> Territory. Action to establish fishing right of Maulele.	.....	65	Do.
Jas. Kona et al. <i>v.</i> Territory. Action to establish fishing right of Amakoli.	.....	46	Do.
W. H. Cornwell <i>v.</i> Territory. Action to establish fishing right of Kaonoulu.	.....	58	Do.
Lokalia Freeman <i>v.</i> Territory. Action to establish fishing right of Waiehu.	.....	49	Do.
H. Waterhouse & Co., Tr., <i>v.</i> Territory. Action to establish fishing right of Papakakai.	.....	70	Do.
W. G. Irwin et al. <i>v.</i> Territory. Action to establish fishing right of Kaohai, Lanai.	.....	54	Do.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Kapua.	.....	25	Third.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Waipio, Harnakua.	.....	34	Fourth.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Hamohamouui, Waiakea.	.....	60	Do.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Kahuwai, Puna.	.....	27	Do.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Kanaeo.	.....	26	Do.
J. O. Carter et al. <i>v.</i> Territory. Action to establish fishing right of Pualaa.	.....	28	Do.
Puna Sugar Co. <i>v.</i> Territory. Action to establish fishing right of Keahialaka.	.....	55	Do.
R. A. Lyman <i>v.</i> Territory. Action to establish fishing right of Kula, Kapoho, Halakamahiwa.	.....	68	Do.
W. H. Shipman <i>v.</i> Territory. Action to establish fishing right of Keaau.	.....	45	Do.
C. B. Makee et al. <i>v.</i> Territory. Action to establish fishing right of Molooa.	.....	73	Fifth.
C. Brown, Tr., <i>v.</i> Territory. Action to establish fishing right of Nawiliwili, Haleia River, Niumalu.	.....	6	Do.
Makee Sug. Co., Ltd., <i>v.</i> Territory. Action to establish fishing right of Waipole and six others.	.....	71	Do.
Lihue Plantation Company (Limited) <i>v.</i> Territory. Action to establish fishing right of Hanamaulu, Kanapoki, and Waiua.	.....	.....	Do.
J. O. Carter et al., Tr., <i>v.</i> Territory. Action to establish fishing right of Waipa.	.....	29	Do.
S. W. Wilcox <i>v.</i> Territory. Action to establish fishing right of Wai-koko.	.....	74	Do.
A. S. Wilcox <i>v.</i> Territory. Action to establish fishing right of Hanalei, Muliwai, Kalihikai, Kalihiwai, and Kalihiwai River.	.....	15	Do.
F. Wundenberg, Tr., <i>v.</i> Territory. Action to establish fishing right of Anini and Hanalei.	.....	44	Do.
McBryde Est., Ltd., <i>v.</i> Territory. Action to establish fishing right of Kuiloa.	.....	4	Do.
A. C. McBryde <i>v.</i> Territory. Action to establish fishing right of Wahiawa, Lawai, and Lawai River.	.....	2	Do.
R. A. Macfie <i>v.</i> Territory. Action to establish fishing right of Kama-hana.	.....	76	Do.

*List of fishery cases—Continued.*

Cases.	Law number.	Case number.	Circuit.
Kapiolani Est., Ltd., v. Territory. Action to establish fishing right of Hanapepe River.	.....	7	Fifth.
William H. Rice v. Territory. Action to establish fishing right of Kipukai and Kalapake.	.....	72	Do.
Alex. McBryde v. Territory. Action to establish fishing right of Kalaheo.	.....	62	Do.
McBryde Estate v. Territory. Action to establish fishing right of Omao.	.....	62	Do.

## LEGISLATIVE WORK IN HAWAII.

Since annexation and the creation of a Territory as an integral part of the Union the legislative work in Hawaii has been accomplished by three regular sessions, one special session, and one special session of the senate alone; this within a period of six years.

The organic act reads as follows:

SEC. 41. That the first regular session of the legislature shall be held on the third Wednesday in February, nineteen hundred and one, and biennially thereafter, in Honolulu.

SEC. 43. That each session of the legislature shall continue not longer than sixty days, excluding Sundays and holidays: *Provided, however,* That the governor may extend such session for not more than thirty days. \* \* \*

SEC. 54. That in case of failure of the legislature to pass appropriation bills \* \* \* the governor shall, upon the adjournment of the legislature, call it in extra session for the consideration of appropriation bills. \* \* \*

As yet the people have not found representatives determined to complete their work within the time allowed for the regular session. Thus far no legislature has passed appropriation bills during the regular session, and thus each automatically forced an extra session. From the following table it will be noticed that there has been a constant decrease in the cost per day of the legislative branch of the government of the regular sessions:

Years.	Acts passed.	Working days.	Cost of both houses.	Cost per diem.
1901.....	27	116	\$94,654.94	\$815.99
1903.....	106	119	84,611.24	711.01
1905.....	103	103	62,578.06	607.55

The foregoing table of the three regular sessions shows a very marked decrease in the total cost of the sessions. This is noteworthy as indicating the progress of the Territory toward economy and efficiency.

The special session of the senate alone was held in 1902, for the purpose of securing its necessary approval to the governor's removal of certain Territorial officials whose public usefulness had ceased. The work lasted twelve days and cost the taxpayers \$4,012.70.

The legislature of 1903 had made appropriations far in excess of the income. On taking office in November of that year it was evident that such financial conditions could no longer be tolerated without

loss of credit, and, on the principle that the making of laws and passing of appropriations are legislative rather than executive work, and that the responsibility for the same lies with the people of the Territory, a special session of the legislature was called. It was convened on the 6th day of April, 1904, and in a period of twelve days this legislature passed fourteen separate bills by which the operating expenses of the Territory were reduced to within its income.

The shortness of this session and the rapidity with which work was done showed what it was possible for the people of the Territory to expect of its representatives. The expenses of that special session were, of course, large per diem, because of the fixed compensation of \$9,000 to which the 45 members were entitled. The total cost was \$11,079.68.

#### PERMANENT SETTLEMENTS.

The Territory of Hawaii inherited from the Republic a number of small permanent settlements or life pensions, amounting to \$1,060 a year. They were in the nature of payments to the wives of men who had been killed by accident or otherwise in performing a public duty. In the year 1902 the legislature added to that list \$7,500 for the former Queen Liliuokalani. In that year one of the former pensioners died, leaving four with annual pensions of \$200 each, making a total of \$8,300. No change occurred in the following years, until the last session of the legislature added a fifth to those receiving \$200 a year, making a total of \$8,500. The present beneficiaries, with respective annual pensions, are as follows:

Queen Liliuokalani .....	\$7, 500
Mrs. Emma Barnard .....	200
Mrs. Kamakani Simeona .....	200
Mrs. Mary R. Stoltz .....	200
Mrs. Paahao .....	200
Mrs. Mahelona .....	200
Total .....	8, 500

#### FIRE CLAIMS.

In the last annual report of the governor there was an error of \$1 in the statement of the fire claims for 1905, which should have read as follows: Warrants outstanding or unpaid July 1, 1904, \$13,448.83; warrants paid during the year ending June 30, 1905, \$7,901.18; warrants outstanding or unpaid June 30, 1905, \$5,547.65, thus leaving cash on hand June 30, 1905, to meet warrants, \$6,281.78, instead of \$6,280.78.

The following is a statement of changes during the current year:

Balance of cash on hand July 1, 1905 .....	\$6, 281. 78
Warrants outstanding June 30, 1905 .....	\$5, 547. 65
Warrants outstanding June 30, 1906 .....	4, 101. 31

Warrants paid during the year ended June 30, 1906 .....	-1, 446. 34
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Balance of cash on hand June 30, 1906 .....	4, 835. 44
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It will be noted that, as in former years, there is an excess of \$734.15 over and above the outstanding warrants.



## CHINESE FUND.

The last annual report showed a balance of cash on hand of \$3,690.80. Thirty-eight claims have been presented and examined by the secretary of the Territory during the fiscal year ended June 30, 1906, their total being \$1,201.20, thus leaving a balance of cash on hand in this special fund in the treasury of \$2,489.60.

## HAWAIIAN COINAGE.

In the governor's annual report for the year 1903 appeared a statement of the Hawaiian coins that had been issued under the monarchy, with the amounts redeemed by the United States up to June 30, 1903. Since that date there has been furnished, through the courtesy of the president of the First National Bank of Hawaii, the following figures:

*Statement of April 17, 1906.*

Denomination.	Total issue.	Redeemed.
Dollars.....	\$500,000.00	\$448,069.00
Half dollars.....	350,000.00	304,947.00
Quarter dollars.....	98,000.00	60,295.75
Total.....	973,000.00	813,311.75

From the foregoing it appears that there were, on April 17, 1906, still outstanding and unredeemed \$51,931 in dollars, \$45,053 in half dollars, \$39,704.25 in quarters, and the entire coinage of dimes, amounting to \$50,000.

As has already been noted, the entire issue of dimes has been taken up by collectors and souvenir hunters, and probably a large portion of the quarters have also disappeared in the same manner.

## POSTAL SAVINGS BANK DEPOSITORS.

In the days of the monarchy the legislature of 1884 established a postal savings bank in Hawaii, which was opened for business on the 1st of July, 1886, with His Majesty Kalakaua as first depositor. That this was a most successful institution is shown by the fact that on the 12th of August, 1898, there were 10,555 depositors, with a total deposit of \$914,047.34. Through this institution, with the security of the whole government behind it, people of small means were enabled safely to invest their funds.

At the time of annexation Congress did not deem it wise to continue the institution, and provision was made to abolish it. As this was known some time in advance, deposits were withdrawn until on the 14th of June, 1900, they amounted to \$764,570.31. This being a part of the indebtedness of the Republic of Hawaii, it was deducted from the four millions which, by the treaty of annexation, the Federal Government agreed to assume. The balance of the four millions was applied to canceling the bond debt of the Republic.

The accounts of 245 depositors in this bank are still uncollected. They represent the sum of \$2,244.74 which has been set apart as a

special fund in the Treasury at Washington. The accounts vary from 3 cents to \$200 and average but \$9.16 apiece. Many of the claimants have died and their estates have not been of sufficient value to warrant their heirs in providing the necessary costs for probate proceedings.

It seems as if some action on the part of Congress is necessary to dispose of these accounts by specifying that all those not collected within a certain date should be debarred and authorizing the Secretary of the Treasury to thereafter apply the remainder to the reduction of the Territory's debt.

#### STUDY OF LEPROSY.

A proclamation appears in the last annual report of the governor, setting aside a mile square of land in the leper reservation at Molokai, a prerequisite to the establishment there by the Federal Government of a hospital and laboratory for the investigation of this disease in accordance with an act of Congress, approved March 3, 1905. This is a matter of very deep interest to the Territory, and it is to be regretted that as yet the work of construction on the ground has not begun. Congress could have taken no action that would have pleased the people of this Territory more than that by which they provided for the investigation and study of this disease, as it has inspired many with hope that the day is not far distant when this disease can be cured or at least alleviated.

#### FINANCES.

From the special article by Mr. A. J. Campbell, treasurer of the Territory, it will be seen that the fiscal period covered by this report ends with a fair amount of cash in the treasury and no floating debt. This has been accomplished mainly by making the taxes payable semiannually in two installments, thus bringing into this fiscal period practically one-half of the total taxes, ordinarily paid in November.

The change makes an apparently large increase of income with a corresponding excess of receipts over disbursements, yet in reality it simply has supplied the treasurer with cash necessary to prevent the registering of warrants. A proper analysis requires that the taxes paid in May, which would ordinarily be paid in November next (\$665,798.94), should be deducted. But even then it is gratifying to note that the year shows a balance on the right side.

Year.	Receipts.	Disbursements.	Excess disbursements.	Excess receipts.
1900-1901.....	\$2, 140, 297. 36	\$2, 576, 685. 53	\$436, 388. 17	.....
1901-2.....	2, 473, 172. 81	2, 382, 968. 90	.....	\$90, 203. 91
1902-3.....	2, 387, 715. 88	2, 603, 194. 20	215, 478. 32	.....
1903-4.....	2, 415, 356. 33	2, 844, 054. 81	428, 698. 48	.....
1904-5.....	2, 354, 813. 02	2, 246, 430. 40	.....	108, 383. 62
1905-6.....	a 3, 320, 998. 90	2, 513, 877. 09	.....	807, 121. 81

a For purposes of comparison. \$665,798.94 of taxes paid in May should be deducted, leaving \$2,655,199.96.

Prior to annexation, in fact from 1895 to 1899, the annual public receipts collected in these islands averaged \$2,450,000. From the foregoing table it will be noted that this has not materially increased, the average for the five years preceding this being \$2,354,000.



## TAXABLE PROPERTY.

President McKinley approved the joint resolution of annexation on July 7, 1898, by which the absorption of Hawaii into the Union became a certainty. In that year the taxes collected on real and personal property, under a rate of 1 per cent, amounted to \$535,024.

On June 14, 1900, came into operation the "organic act" passed by Congress and approved April 30, 1900. During that year the actual collections, with a similar rate, amounted to \$934,455.

During the year 1905, with a like rate, the collections amounted to \$1,179,998. If we deduct the collections made from March 31, 1906, we will find that, had there been no change in the law, the income from real and personal property this year would have been \$1,314,038.61.

Without further investigation, this would indicate a great increase of wealth. But a slight examination shows that there has not been a corresponding increase in the total income of the Territory. Prior to June 14, 1900, a large proportion of the revenues consisted of customs receipts. When these were surrendered to the Federal Government it became necessary to replace the loss from some new source or to reduce the expenditures of the people. It is exceedingly difficult for a community to retrench. People accustomed to official management of various public services—to a form of government covering a wide range of functions—are not likely to submit to a sudden contraction. Hawaii met the situation, first, by a general acceptance of increased valuations on real and personal property; next, by imposing an income tax; and lastly, by a heroic cut in appropriations.

The figures show an increase in income from real and personal property of 74 per cent, caused by annexation, i. e., there was a jump from \$535,024 in 1898 to \$934,452.32 in 1901. Yet after the reaction of this sudden inflation had set in the people submitted to still greater valuations, and notwithstanding constant reductions in rental values and earning capacity, during the next four years an increase of 27 per cent took place—a jump from \$934,452.32 in 1901 to \$1,179,998.27 in 1905. Now, had there been a corresponding increase in wealth these figures could be maintained. That the taxable values of property have been too high is shown by the fact that last year the assessors were forced to submit to a reduction of \$2,749,085 in the total value of taxable property, as is shown by the following:

Total grand list, January 1, 1905.....	\$133, 924, 100
Total grand list, January 1, 1906.....	131, 175, 015

## BONDED DEBT.

As the treasurer shows, the bonded debt has increased during the year \$724,000. Thus the total indebtedness of the Territory is 2.90 per cent of the taxable property.

The following is a comparative statement of taxes collected for each fiscal year since annexation:

*Comparative statement of taxes collected for each fiscal year since annexation.*

	1900-1901.	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.
Real estate.....	\$444,059.63	\$532,637.09	\$560,456.31	\$618,890.81	\$609,343.72	\$961,433.76
Personal property.....	490,392.69	571,248.69	592,325.37	607,589.82	570,654.55	928,841.53
Insurance.....	3,223.65	3,846.00	4,685.11	4,623.38	56.15	.....
Dogs and tags.....	4,135.86	4,325.19	4,787.60	4,484.80	5,395.50	5,579.60
Bicycle tags.....	.....	.....	.....	.....	.....	143.10
Poll.....	49,922.00	46,299.00	51,009.00	48,148.00	49,998.00	48,791.00
Road (including carriages, carts, and drays).....	114,459.50	108,861.00	119,822.00	114,806.00	118,144.00	139,849.00
School.....	99,838.00	92,592.00	102,016.00	96,296.00	99,996.00	97,582.00
Ten per cent penalties ..	7,699.43	9,586.27	9,359.31	12,011.82	12,107.03	10,260.93
Interest.....	.....	.....	.....	.....	.45	462.41
Costs.....	1,595.15	1,525.05	1,465.65	1,806.70	3,322.12	2,216.68
Income.....	.....	287,866.80	205,096.00	172,542.16	157,057.98	392,130.22
Total.....	1,215,325.91	1,658,107.09	1,651,023.12	1,681,199.49	1,626,075.50	2,587,290.23

TERRITORIAL BONDS.

Attention is called in the last governor's report to the restriction which the organic act placed on the kind of bonds that may be issued by the Territory. Only those that are redeemable after five years and payable in fifteen years from date can be sold. This is a restriction which Congress should remove, as the modern tendency in finance makes our bonds practically five-year bonds and so short a term as this renders them undesirable to a large class of investors. From suggestions offered by leading financial houses in New York City it would be far better for the Territory to be restricted to the issue of a bond payable twenty years after date of issue, with a condition that 5 per cent of every issue must be redeemed each year, the bonds to be redeemed to be drawn by lot. It is claimed that such a bond is always more certain of payment, and commands therefore a higher market price. Such a law would enforce upon this Territory the necessity of not only meeting its obligations but of providing a sinking fund for the extinguishment of it, one-twentieth of each issue being paid every year.

NEEDED LEGISLATION.

The passage by Congress of the so-called "funding bill" is of greater importance than all other things combined. A breakwater at Hilo, for the protection of its commerce, a hydro-geological survey of the life-giving waters of these islands, and many other matters need attention, but it is useless to flood Congress with a lot of minor measures when one of so great importance is before it.

If American control of Hawaii is to be benignant and intelligent the principle must be admitted that noncontiguous areas, separated by 2,000 miles from the mainland, must have different treatment from those political subdivisions which are separated from their neighbors only by an imaginary line. Not only geographically is the difference great, but Hawaii is the point of contact where the Orient and the Occident meet, and our institutions and citizens should be of the highest and best type. And until we can secure a recognition of the

principle that different conditions require different treatment, it is useless to expect that the small, far cry from Hawaii will be heard in the clamor at Washington of nearer and larger subdivisions of the Union.

At present, Hawaii's resources are unnecessarily and unduly taxed, and the problems that our citizens here are struggling with deserve more encouragement and assistance from "Uncle Sam."

## ARTICLES ON THE VARIOUS DEPARTMENTS OF FEDERAL WORK IN THE TERRITORY.

### AGRICULTURAL EXPERIMENT WORK.

[By JARED G. SMITH]

Under the direction of the Secretary of Agriculture the entire station staff devotes its principal attention to the demonstration of the possibility of growing crops other than sugar, the ultimate intention being an increase in the number of the American citizen population in Hawaii. The plan is to demonstrate by field experiments at the Hawaii Experiment Station, or elsewhere, by the introduction and distribution of seeds and plants, by the dissemination of information in printed form by letter and by lectures, by the maintenance of a farmers' institute, by assistance rendered to agricultural societies in Hawaii. In 1901, when this station was established, there were practically only five industries—sugar, cattle raising, rice, taro, and coffee. In 1906, at the end of five years' work for diversification, there are in addition to these, sisal, pineapples, tobacco, rubber, vanilla, silk, bee keeping, and a large and growing fresh-fruit trade. The increase in the production of wealth in Hawaii because of the establishment of these new industries amounts to over \$1,000,000 per annum.

#### TOBACCO INVESTIGATIONS.

The object is to demonstrate the possibility of growing cigar-leaf tobaccos in Hawaii. The work is carried on by the joint assistance of the experiment station, the territorial board of agriculture, and private parties. A small crop was grown under cloth in 1904. In 1905,  $1\frac{1}{2}$  acres were grown without shelter, and in 1906, 4 acres are under cultivation under field conditions. About 200 acres of tobacco have been planted by private parties since 1904. The station has produced, at its Hamakua tobacco farm, Sumatra-wrapper tobacco, valued by experts at from \$1 per pound upward, and Habana tobacco of good burning qualities equal in flavor and aroma to any similar types grown on the mainland of the United States.

#### RUBBER INVESTIGATIONS.

The object is to determine the influence which cultivation and the use of fertilizers may have on the yield and quality of commercial rubber. Experiments are under way on the station reservation at Honolulu and the lands of the Koolau Rubber Company at Nahiku, Maui, the latter being a cooperative experiment. No results have as yet been obtained.



## COFFEE INVESTIGATIONS.

To assist and extend the cultivation of coffee in Hawaii data have been secured relative to the method of cultivation, planting, topping, shading, fermentation, growing, and marketing of the coffee trees and coffee bean, besides an investigation of the diseases and insect pests of coffee. The cultivation of coffee is now on a sound financial basis in this Territory. All who are now engaged in the production of coffee are doing so at a very slight margin of profit. However, any considerable extension of the industry depends on aid given by the National Government, either through a duty on coffee brought into the United States from foreign countries or by a direct bounty to be paid on all coffee produced in the United States by the labor of American citizens. There are 300,000 acres of land in the Hawaiian Islands available for the production of this crop; with a duty of 2 cents per pound, or with a direct bounty of \$30 per ton, Hawaii could produce 30 per cent of the whole quantity now consumed within the United States, and this maximum could be attained within ten years.

There is no other industry comparable with the coffee industry for the support and maintenance of a European citizen population. The coffee belt is the most salubrious in the island, and the whole industry is one to which white men would readily turn their attention; provided the National Government would give to this industry the same protection that is afforded to sugar and other crops. Assuming that the average yield of sugar per acre is 4 tons, and that every acre of cane requires two years for its growth, it will be seen that there is a protective tariff of \$68 on every acre of cane grown in Hawaii. The American sugar tariff of \$34 per ton is not entirely prohibitive as regards the importation of sugar from foreign countries. Coffee is a white man's industry, and as such it should receive protection equal to that given to sugar cane. A duty of 2 cents per pound would yield about \$20 per acre protection. A duty of 5 cents would undoubtedly prove prohibitive to foreign competition, and would lead to the investment of \$100,000,000 of outside capital in Hawaii during the next five years.

## PLANT PATHOLOGY.

To study and report upon the fungus diseases on cultivated crops other than sugar, preliminary investigations have been made of the diseases of pineapples, potatoes, coffee, vanilla, mangoes, tobacco, carnations, and other crops. Two press bulletins and four bulletins of the regular series have been issued relative to the methods of control of plant diseases.

## CULTIVATION OF PLANTS YIELDING TANNIN.

To demonstrate that the cultivation of tan-bark trees is a profitable industry, 6 acres of Black Wattle situated on the station reservation at the lower edge of the Tantalus forest were cut, the wood corded and sold, the bark dried, chopped, baled, and exported. The total yield per acre amounted to \$254.84 for wood and tan bark. Samples of tan bark were sent to many tanners in the United States and a considerable interest was developed. Tanners at Benicia, Cal., stated that if Wattle bark could be guaranteed in thousand ton lots the price

would be much better than that which was outlined, but as it is I know of no other tree suitable for cultivation on large areas in Hawaii that would yield \$250 per acre at the end of ten years. The station demonstration was of value as showing the use which may be made of mountain slopes too steep or rocky for other cultivation at elevations of from 800 to 3,000 feet.

#### COMPOSITION OF HAWAIIAN FEEDING STUFFS.

To determine the chemical composition of Hawaiian fodder, particularly those not used for fodder on the mainland; to determine the amounts of the most important ash constituents in Hawaiian grown fodders; to determine the best means of supplying lime in a ration through the medium of the fodder alone without the addition of lime salts; to supply data with which to carry on feeding experiments and determinations of digestion coefficients. Two bulletins have been published—during 1906—Bulletin No. 13, "The Composition of Some Hawaiian Feeding Stuff," and Press Bulletin No. 15, "Lime an Essential Factor in Forage."

#### CHEMICAL CONSTITUTION OF NITROGENOUS COMPOUNDS IN HAWAIIAN SOILS.

To determine more definitely than is now known the chemical composition and constitution of the body or group of bodies known as humus; to determine the identity and constitution of organic nitrogenous bodies other than humus in Hawaiian soils; to determine whether any organic or nitrogenous bodies present in Hawaiian soils are directly assimilated by plants; and also the degree to which humus and humus compounds can be nitrified. Work of this character is at the foundation of all definite knowledge of the compositions of soils. The only knowledge that we have on the subject has been obtained through fertilization of soils to determine their ability to produce agricultural crops. It is a line of research investigation not being carried on, so far as known, at any agricultural laboratory outside of Germany. With all the work that has been done for a hundred years by soil chemists, very little has ever been determined in regard to the form in which mineral and organic plant food occurs in the soil. The ordinary chemical analysis simply demonstrates academically the presence of certain chemical elements. But we know almost absolutely nothing as to the form in which these elements are combined and whether they are, or are not, available as plant food.

#### DENITRIFICATION IN HAWAIIAN SOILS.

To determine to what extent and under what conditions denitrification takes place in Hawaiian soils.

#### CHEMICAL COMPOSITION OF HAWAIIAN HONEYS.

To determine the proximate composition of Hawaiian honeys and the variation due to the source; to furnish data concerning the composition of honey for the use of bee keepers selling this product on analysis; to determine to what extent in Hawaii elaborate honey from other material than the nectar of flowers, such as from cane sugar, molasses, the honey dew of leaf hoppers, the nectar of extra floral nectaries; to determine, if possible, the factors influencing granulation; and to determine the causes of abnormal ash composition.

Over fifty samples of known sources have been collected through cooperation with bee keepers in the islands, and these are to be analyzed for the purpose above mentioned.

#### MANGANESE IN HAWAIIAN SOILS.

To determine the form or forms in which manganese is present in Hawaiian soils and the amount, if any, of water soluble manganese; to determine the relation, if any, of large amounts of manganese in the soils to the presence of ferrous iron and the changes in form of combination, solubility in water resulting from cultivation; to carry on experiments relative to the effect of water soluble manganese on plant growth. The chemist of this station has discovered that large areas of soil in certain sections of the island which have been proved difficult of treatment in the cultivation of cane, pineapples, and other plants contain sometimes as high as 10 per cent of manganese, and it is suspected that this abnormal composition of the soil has something to do with the failures of cultivated crops grown on these fields.

#### MARKETING OF TROPICAL FRUITS.

To determine what Hawaiian fruits can be safely shipped to the mainland markets and the best methods of handling, packing, and shipping them. To determine the market conditions on the mainland relative to tropical fruits and the possibilities of extending this market. Preliminary shipments of alligator pears, mangoes, papaias, the finer varieties of bananas, and pineapples were made, in 1904 and 1905, in cold storage to New York and other eastern points. On August 1, 1906, the station horticulturist left for San Francisco with 6 tons of fruit of the above varieties, packed and treated in different ways. Studies are to be made on their condition in transit and upon arrival, and the market conditions are to be studied from southern California to British Columbia.

#### BANANA CULTIVATION.

To determine the best methods to practice in the cultivation of the banana in Hawaii, the most desirable varieties from a market standpoint, and the introduction of desirable commercial varieties from foreign countries. Five acres of land have been planted at Hilo in a fertilization and cultivation experiment. This work is being done in cooperation with the Hilo Boarding School. A large shipment of Bluefield bananas from Costa Rica is being propagated for distribution.

#### CACAO CULTIVATION.

To determine the adaptability of the cacao tree to Hawaiian conditions, together with the study of cultivation methods. Three acres of land have been planted with cacao imported from Venezuela, Trinidad, Jamaica, and Samoa. The experiment is in cooperation with the Hilo Boarding School.

#### PINEAPPLE INVESTIGATIONS.

To determine the best methods for the cultivation of pineapples, the diseases and insect pests, varieties, and fertilization. It is proposed to publish a bulletin for the instruction of those who wish to



engage in this industry in Hawaii, setting forth the methods of cultivation best adapted to our conditions.

#### RICE CULTURE IN HAWAII.

To devise more thorough and cheaper methods of tillage than are now in vogue. To compare the relative value of broadcast sowing and drilling of seed with the expensive oriental method of transplanting from seed beds. To study the duty of water in irrigation and the value of drainage in the culture of lowland rice. To determine the adaptability of modern rice-harvesting machinery to Hawaiian conditions and to investigate the best and most economical methods of rice milling. Three and two-tenths acres of rice land belonging to the Ii Estate (Limited), located at the corner of King street and Kalakaua avenue, have been leased, together with water rights. The experiment is a cooperative one between the station, the Bishop estate, the Ii estate, and the Bureau of Plant Industry of the Department of Agriculture in Washington. Over two hundred varieties of rice have been secured from oriental countries. Pot experiments have already been undertaken, and plot work will be conducted on as large a scale as is possible with the amount of funds available.

#### RICE BREEDING.

To improve existing varieties of Hawaiian rice which do not now meet the requirements of our largest consumers, the Japanese laboring class; to select and originate varieties which may prove more productive; to develop a superior variety more tolerant to the brackish waters prevalent near the sea.

#### CHEMICAL FERTILIZERS AND ROTATION IN HAWAIIAN RICE CULTURE.

To determine the value of chemical fertilizers in manuring the rice crop; to determine the value of crop rotation in Hawaiian rice culture. Suitable plants for low, wet land culture are being sought, and will be planted either as substitutes for the rice crops or as a rotation crop with rice.

#### SILK CULTURE IN HAWAII.

To determine the race of silk worm best suited to local conditions; the quality of silk that can be produced in Hawaii, and the possibility of growing the silkworm cocoons as an industry. Breeding experiments and investigations have been carried on at the station in cooperation with the Bureau of Entomology of the Department of Agriculture. A race of silkworm has been grown thought to be suitable to the Hawaiian climate, and cocoons have been tested and the raw silk analyzed for comparison with the product of other silk-producing countries. The work thus far has been very encouraging, and silk of excellent quality has been produced.

#### BEE KEEPING IN HAWAII.

To determine the extent and importance of bee keeping in Hawaii; the possibility of extension of the industry; improvements in races of bees and methods of apiculture; to investigate enemies and diseases of bees and the control of the same; to study the sources of Hawaiian honey, and to introduce additional plants suitable for bee pasturage.

New races of bees have been introduced through the cooperation of the Bureau of Entomology of the Department of Agriculture, Washington, D. C., and studies have been made of the bee moth, a serious parasite of hive bees and of a bacterial disease affecting the honeycomb. The various island honey companies have actively assisted the station in carrying on these important lines of investigation.

#### FEDERAL QUARANTINE PROBLEMS.

[By L. E. COFER.]

The prospective opening in December of the Tehuantepec route, over which Hawaiian sugars will be transported to the Northeastern States and general merchandise brought as return cargoes, will create a quarantine problem of the greatest importance to the people of Hawaii. This quarantine problem is caused by certain factors, namely, the disease, yellow fever; its intermediate host, the *Stegomyia* mosquito; the actually or presumably infected Tehuantepec Peninsula; the infectible Territory of Hawaii, and finally the connecting or controlling influence, the transportation lines.

#### THE DISEASE, YELLOW FEVER.

The Public Health reports of the Public Health and Marine-Hospital Service, during the biennial period ended December 31, 1905, show that there were 242 cases of yellow fever in the isthmian town of Coatzacoalcas, the eastern terminus of the Tehuantepec Railway; 2 cases in Salina Cruz, the western terminus of the said railway; and 85 cases in Tehuantepec, a town having communication with the first two named.

#### THE INTERMEDIATE HOST, THE STEGOMYIA MOSQUITO.

This mosquito, the intermediate host of yellow fever, is not only present in Hawaii and on the Tehuantepec Peninsula, but is capable of being transported in vessels. The theory that the stegomyia is only infected by man and that the yellow fever virus can only affect man through the intermediation of this mosquito is universally accepted.

#### THE ACTUALLY OR PRESUMABLY INFECTED TEHUANTEPEC PENINSULA.

The statistics given above show that the Isthmus of Tehuantepec has been infected with yellow fever during the past. Therefore, from a quarantine standpoint, with our present knowledge of yellow fever and the circumstances which attend an appearance of this disease, evidence to the effect that it is not now infected with yellow fever must be accepted as negative, unless said evidence be made positive by regular and continuous reports from officers of the Public Health and Marine-Hospital Service stationed in the isthmian towns.

#### THE INFECTIBLE TERRITORY OF HAWAII.

It may be said that any tropical or semitropical locality inhabited by the stegomyia is "infectible" so far as yellow fever is concerned, and that such a locality may become infected at any time by the introduction of a case of yellow fever or a mosquito infected with the disease.



## THE CONNECTING OR CONTROLLING INFLUENCE, THE TRANSPORTATION ROUTES.

The *stegomyia fasciata* is a good "sailor" and, according to Guiteras, an infected mosquito can live one hundred and fifty-four days; therefore the possibility of the transmission of the infected adult mosquito must be accepted as a fact for quarantine purposes. The arrival of vessels with actual cases of yellow fever on board is of course not an unusual occurrence in quarantine practice.

## THE SOLUTION OF THIS QUARANTINE PROBLEM.

The solution of what might be called the "Hawaiian-Tehuantepec quarantine problem" lies in three agencies:

*First.*—The organization of the Public Health and Marine-Hospital Service.

*Second.*—Internal sanitation and mosquito extermination at Honolulu.

*Third.*—Internal sanitation, mosquito extermination, and the employment exclusively of immune stevedores in the isthmian towns.

*First.*—The organization of the Public Health and Marine-Hospital Service. This Service, as a whole, has had a vast amount of experience in combating yellow fever, and Hawaii may rest assured that Surgeon-General Wyman is alive to the local situation and will meet the latter by the operation of all modern scientific quarantine methods applicable thereto.

*Second.*—Internal sanitation and mosquito extermination at Honolulu. The Hawaiian Territorial board of health has been doing steady and efficient work in internal sanitation and mosquito extermination, and if they are ever to be encouraged morally and financially in a further elaboration of this work there will never be a greater incentive than that which is presented by the Hawaiian-Tehuantepec quarantine problem.

*Third.*—Internal sanitation, mosquito extermination, and the employment exclusively of immune stevedores in the isthmian towns. A few weeks ago Mr. Hackfeld and Mr. Pfotenhauer, of Hackfeld & Co., who have interested themselves to a highly gratifying and public-spirited degree in the problem under consideration, so far as it affected their steamers and the sanitary status of the two termini of the isthmian railway, showed me a letter which they had received from the president of the American-Hawaiian Steamship Company, in which many recent sanitary improvements in the isthmian towns were set forth. The information contained proved from a quarantine point of view good negative evidence as to the present noninfectedness of the said isthmian towns, and the value of this negative evidence is still further strengthened by the fact that the public health reports of the Public Health and Marine-Hospital Service show no cases of yellow fever at Coatzacoalcos during the six months ending June 30, 1906, and only one case at Salina Cruz during the same period, the said case having been imported on March 18.

The employment of immune stevedores exclusively on the Isthmus is practical, easily possible, economical, and of the utmost importance.

## IMPROVEMENT OF HARBORS.

[By Lieut. J. R. SLATTERY.]

## PEARL HARBOR.

This harbor is 8 miles west of Honolulu. Before improvement there was a bar at its entrance with a low-water depth of 10 feet on its crest and a coral reef on either side. The project for improvement contemplated dredging a channel 200 feet wide and 30 feet deep at mean low water at an estimated cost of \$100,000. Congress approved this project by appropriating \$100,000 in the act of March 3, 1899.

Contract was made in 1901 for doing the work required. Dredging was begun in March, 1902, and completed in August, 1903, which resulted in a channel 200 feet wide and fully 30 feet (and generally 31 feet) in depth at low water entirely across the bar from deep water in the ocean to deep water in the harbor, at an expenditure of \$99,323.62. The channel has maintained itself.

As yet there is no commercial activity in the harbor. Inside the bar the channel is so crooked and the turns so sharp that it is not safe for the navigation of large vessels. No estimate for remedying this defect has yet been authorized by Congress. The mean range of tides at the entrance is about 14 inches. The work, so far as authorized and appropriated for, has been completed in accordance with the project.

## HONOLULU HARBOR.

This harbor is situated on the south coast of the island of Oahu. It is formed by a coral reef, a narrow channel through the reef affording access to the harbor. The entrance channel and harbor proper were dredged from time to time by the monarchical, republican, and territorial governments of Hawaii prior to July 1, 1904. On this date there existed an entrance channel, having a depth of about 35 feet and a minimum width of about 200 feet at mean low water. The harbor proper, that portion commencing at the light-house and extending to the mouth of the Nuuanu River, had a general width of 800 feet. The water for about 200 feet immediately along the wharves had a depth of from 30 to 32 feet. Elsewhere there was only about 27 feet at low water. The bend at the light-house point was so sharp as to be somewhat difficult for large vessels to get around. The shallow water in the harbor made it impossible for the largest vessels calling at the port to enter the harbor when at all heavily laden. The narrowness of the harbor made turning difficult for all ships.

The present project was adopted by the river and harbor act of March 3, 1905. It provides for an entrance channel 35 feet deep and 400 feet wide at mean low water from deep water at the entrance to the light-house point; for easing the curve at the junction of the entrance channel and the inner harbor by cutting off the light-house point; and for enlarging the harbor proper so that it will have a depth of 35 feet and a general width of 1,200 feet at mean low water, at an estimated cost of \$1,582,840.67, exclusive of a new front range light, estimated to cost \$30,000.

The river and harbor act of March 3, 1905, appropriated \$200,000 for this improvement and authorized a continuing contract for the work to an additional amount not exceeding \$200,000.

Proposals for dredging were opened July 20, 1905, contract was entered into on August 16, 1905, and work was commenced on November 3, 1905, with two hydraulic dredges. On June 30, 1906, the sum of \$193,099.61 has been expended. No part of this was for maintenance.

As a result of the year's work the entrance channel is now 400 feet wide and 35 feet deep at mean low water, and the harbor proper has a general width of 800 feet and a depth nowhere less than 35 feet. In connection with the harbor improvement about 34.6 acres of land belonging to the United States and under the immediate control of the Navy Department and Department of Commerce and Labor were reclaimed with the material dredged, without additional cost. The island just seaward of the light-house was also reclaimed in the course of the work. This island has made the water in the harbor much more quiet, and if it can be enlarged in connection with future work it will be a valuable acquisition. Certain private land belonging to the Dowsett Company (Limited) and Oahu Railway and Land Company (Limited) were also reclaimed. Another portion of the material dredged was used in reclaiming Quarantine Island, for which the contractors were paid 10 cents per yard in addition to the price paid for dredging. A portion of the dredged material was placed on other private lands near the harbor, and a small portion of the material was tossed to sea.

## FINANCIAL STATEMENT.

July 1, 1905, balance unexpended.....	\$198,797.25
Amount appropriated by sundry civil act approved June 30, 1906.....	200,000.00
	<hr/>
	398,797.25
	<hr/>
June 30, 1906, amount expended during fiscal year for work of improvement.....	191,897.06
July 1, 1906, balance unexpended.....	206,900.19
July 1, 1906, outstanding liabilities.....	141,667.52
July 1, 1906, balance available.....	65,232.67
July 1, 1906, amount covered by uncompleted contracts.....	65,232.67
Amount (estimated) required for completion of existing project.....	1,182,840.67
Amount that can be profitably expended in fiscal year ending June 30, 1908, in addition to the balance unexpended July 1, 1906, for work of improvement.....	600,000.00

## RECLAMATION OF QUARANTINE ISLAND.

Quarantine Island is a low, swampy island lying on the reef, on the side of Honolulu Harbor, opposite the city. The quarantine authorities had scraped up the shallow layer of sand overlying the coral reef and raised the land immediately surrounding the buildings and the roads to a height of about 2 feet above high water. Practically all the rest of the island was submerged at high water.

The present project, adopted February 27, 1906, consists in reclaiming the low and swampy portions of Quarantine Island lying within the concrete sea wall, by pumping material dredged from Honolulu Harbor to fill the same, at an estimated cost of \$20,000.

The urgent deficiency act of February 27, 1906, provided as follows:

For the reclamation of Quarantine Island, Honolulu, Hawaii, from the materials now being dredged from the harbor of Honolulu, to be expended under the direction of the Secretary of War and the supervision of the Chief of Engineers, twenty thousand dollars.



Contract was accordingly entered into with the contractors for dredging in Honolulu Harbor on April 10, 1906, and work commenced on May 21, 1906.

On June 30, 1906, approximately 142,596 cubic yards of material had been deposited upon the island, the work being about three-fourths completed.

At the close of the fiscal year the sum of \$245.65 had been expended. No part of this was for maintenance. The balance available will be used to complete the work.

As a result of this work all of Quarantine Island will be made dry land, whereas before the only land above high water was the roads and several small plots about each building.

#### REMOVING SUNKEN VESSELS.

An allotment of \$6,100 was made on November 8, 1905, from the indefinite appropriation made by section 20 of the river and harbor act of March 3, 1899, for removal of wreck of the American bark *Martha Davis* from Hilo Harbor, Hawaii. An emergency contract was entered into with Fred C. Miller, of Honolulu, on December 12, 1905, for removal of this wreck, and was completed on May 17, 1906. The total cost of the work was \$4,050.25.

#### FORTIFICATION SITES.

The act of Congress of April 21, 1904, appropriated \$200,000 for the acquisition of sites in the Hawaiian Islands. In accordance with this act sites have been purchased in the Territory of Hawaii as follows:

The Waialae tract, on November 29, 1904.....	\$32, 600
The Puuloa tract (all except one lot belonging to D. H. Hitchcock), on December 20, 1904.....	73, 038
The D. H. Hitchcock lot (Puuloa), on January 25, 1905.....	1, 000
The Hobron property, on January 4, 1905.....	22, 500
The Schaefer property, on June 29, 1906.....	20, 000
The Waterhouse property, on June 29, 1906.....	17, 500
The Afong property, on June 29, 1906.....	28, 000

The total expenditure incurred in the acquisition of the above sites was \$195,641.28. Appropriation \$200,000.

In addition to the matters covered in these reports the following summary of appropriations made during the past session of Congress for works under the United States Engineers' office are of interest:

For range lights, Honolulu Harbor.....	\$40, 000
For first order light station, Makapuu Point.....	60, 000
For construction of seacoast batteries in the Hawaiian Islands.....	260, 000
For sites for defenses for the Hawaiian Islands.....	150, 000

#### SHIPPING AT HONOLULU.

[By NORMAN WATKINS.]

The business of the office of the United States shipping commissioner has increased about 10 per cent over the preceding year, owing largely to the greater number of sailing vessels coming here to load sugar for the Atlantic seaboard.

There has been an unusual scarcity of seamen in port during the sugar-shipping season, and ships leaving port, while they have not

been shorthanded as to numbers, have shipped inexperienced men, many of whom were Japanese and Porto Ricans. The reason for the shortage of seamen may be traced to the large amount of public work that has been under way in the city during the past year, on which many seamen have obtained employment.

A feature in shipping circles that has been in no way a credit to the port has been the unusual amount of litigation between seamen and vessels. During the month of May last there were five cases tried in the United States court against vessels of the sugar fleet. Four of the cases have already been decided in favor of the defendants, while the fifth case is pending. The parties bringing suit have been put to practically no expense, while the vessels have been compelled to defend trivial suits, at an expense of hundreds of dollars.

It is of interest, now that it is a well-known fact that the sailing fleet of the past is soon to be crowded out by the steamers, to state that this office paid out to seamen of sailing vessels during the last six years about \$325,000, and only \$25,000 to seamen of steamers during the same period.

#### POST-OFFICES.

[By JOSEPH G. PRATT.]

Herewith are alphabetical lists of the post-offices in the different counties of the Territory of Hawaii, those marked (A) being international as well as domestic money-order offices and those marked (B) domestic money-order offices.

Honolulu is the only first-class office within the Territory. Hilo is second-class, Lahaina, Wailuku, Lihue, and Kohala are third-class. All of the remainder are fourth-class.

#### HAWAII COUNTY.

Hakalau (A).	Lalamilo.
Hilo (A).	Laupahoehoe (A).
Holualoa (A).	Mahukona (B).
Honokaa (A).	Mountain View (B).
Honomu (B).	Naalehu (A).
Honuaopo.	Napoopoo.
Hookena (B).	Olaa (A).
Hoopuloa (B).	Ookala (A).
Kailua (B).	Paauhau (A).
Kalapana.	Paauilo (B).
Kamuela (B).	Pahala (A).
Kawaihae.	Pahoa.
Kealahakua (A).	Papaaloa (A).
Keauhou.	Papaikou (B).
Kohala (A).	Pepeekeo (A).
Kukuihaele (B).	Volcano House.
Kurtistown (A).	Waiohinu (B). Total, 34.

#### KALAWAO COUNTY.

Kalaupapa (B).	Kalawao. Total, 2.
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#### KAUAI COUNTY.

Eleele (A).	Kilauea (A).
Hanalei (B).	Koloa (A).
Hanapepe (B).	Lihue (A).
Kealia (A).	Makaweli (A).
Kekaha (A).	Waimea (A). Total, 10.



## MAUI COUNTY.

Haiku.	Keomuku.
Halawa.	Kihei (B).
Hamakuapoko (B).	Kipahulu (B).
Hana (B).	Lahaina (A).
Honokahau.	Makawao (B).
Huulo.	Makena.
Kaanapali.	Paia (A).
Kahului (B).	Peahi.
Kalae.	Pelekunu.
Kamalo (B).	Pukoo.
Kaunakakai.	Puunene (A).
Kaupo (B).	Waiahoa.
Keanae.	Wailuku (A). Total, 26.

## OAHU COUNTY.

Aiea (A).	Pearl City.
Ewa (A).	Wahiawa (B).
Haleiwa (B).	Waialea.
Heeia.	Waialua (A).
Honolulu (A).	Waianae (B).
Kahuku (A).	Waikane.
Lale.	Waimanalo (A).
Maunawai (B).	Waipahu (A). Total, 17. Grand total, 89.
Midway Island.	

## IMMIGRATION BUSINESS.

[By RAYMOND C. BROWN.]

Subsequent to March, 1906, a division was made of immigrant aliens and nonimmigrant aliens. During the three months of April, May, and June 99 nonimmigrant aliens have arrived at this port, coming from 7 different countries and destined for 10 different countries. The arrivals during the fiscal year were as follows:

Month.	Japan- ese.	Chinese.	Miscella- neous.	Total.
July.....	308	20	25	353
August.....	142	16	16	174
September.....	171	19	17	207
October.....	659	15	17	691
November.....	706	7	27	740
December.....	774	10	25	809
January.....	1,004	7	28	1,039
February.....	1,066	2	14	1,082
March.....	1,367	4	13	1,384
April.....	1,423	.....	6	1,429
May.....	1,174	2	3	1,179
June.....	1,143	.....	3	1,146

During the year the board of special inquiry has deported to the country whence they came 2 aliens who were liable to become a public charge, 4 having a loathsome disease, 7 coming to the United States under contract to perform labor, and 43 suffering with a dangerous, contagious disease.

There have been 161 permits issued to Chinese laborers, resident in Hawaii, granting them permission to visit China with the privilege of returning to Hawaii within one year. During the same period 6 Chinese persons were refused a landing at this port and were returned to their own country.

During the year the lot around the new immigrant station has been completely filled, about 100,000 cubic yards of silt, taken from the harbor, being used for the purpose. A portion of the lot has been planted in grass, trees (both fruit and ornamental) have been planted, grounds were platted for walks and driveways, and in a very short space of time it is hoped to make this site one of the beauty spots of Hawaii.

## INTERNAL REVENUE.

[By ROY H. CHAMBERLAIN.]

*Receipts and disbursements of the office of United States reveune during the fiscal year ended June 30, 1906.*

## RECEIPTS.

Collections on lists (fines and penalties) . . . . .	\$1, 069. 35
Fermented liquors . . . . .	14, 770. 00
Distilled spirits (tax paid) . . . . .	9, 351. 76
Cigars and cigarettes . . . . .	33. 07
Tobacco and snuff . . . . .	2, 438. 51
Special taxes . . . . .	14, 211. 66
Playing cards . . . . .	876. 58
Total receipts . . . . .	42, 750. 93

## ADDENDA.

Source of "special tax" collections as above, and number of special taxpayers:

Rectifiers of less than 500 barrels, per annum . . . . .	3
Wholesale liquor dealers . . . . .	48
Wholesale dealers, malt liquors . . . . .	5
Retail liquor dealers . . . . .	367
Retail dealers, malt liquors . . . . .	5
Brewers of 500 barrels or more, per annum . . . . .	1
Wholesale dealers in uncolored oleomargarine . . . . .	2
Retail dealers in uncolored oleomargarine . . . . .	11
Manufacturers of cigars . . . . .	1
Manufacturers of playing cards . . . . .	3
Total special taxpayers . . . . .	446

Total disbursements, including salaries and incidental expenses . . . . . \$11, 082. 57

One winery has been started in this district and has manufactured a wine of superior quality from Hawaiian-grown grapes. Undoubtedly there is a large and profitable future for the wine industry in these islands.

Extensive investigations have been made during the past year to ascertain the spirit producing qualities of molasses, pineapples, bananas, ti root, and coffee pulp.

From statistics gathered from the sugar crop of 1905 molasses alone would produce 8,524,956 proof gallons of spirits per annum.

Undoubtedly the large amount of waste materials from the products of these islands will in the future be one of the various wealth-producing sources.

## UNITED STATES DISTRICT ATTORNEY.

[By R. W. BRECKONS.]

During the year ended June 30, 1906, 21 civil cases, in which the United States was a party, were terminated; 13 of these were customs cases involving appeals by the United States from appraisements made by the Board of General Appraisers in New York. Nearly all of them hinged on one question, and all were decided in favor of the importer.

Seven miscellaneous cases were terminated, 6 resulting in judgments for the United States, and 1 against the United States. The majority of these cases were condemnation proceedings, rendered necessary by reason of the title to land desired by the United States being faulty.

During the year 48 criminal cases were terminated—2 customs, 4 internal revenue, 6 post-office, and 36 miscellaneous. Of these, 12 cases were nol-prossed, in 2 cases there were acquittals, and in 34 cases there were convictions.

Fines to the extent of \$3,174.34 were inflicted, of which \$1,130 were collected.

It is gratifying to note that during the year the number of cases of traffic in women materially decreased. Either the class formerly engaged in this traffic has grown more subtle in its transactions, or has to some extent ceased its violations of the law.

This is likewise true of illicit distilling. The number of cases terminated during the year was very small compared with previous years. I am rather inclined to believe that this has partially been the result of the repeal of the territorial law on the subject of illicit distilling. The collector of internal revenue has requested all police officers to notify him of illicit distilling cases, and such of them as have arisen since the repeal of the territorial law have been reported to the collector. The penalty inflicted by the laws of the United States is much more severe than that which was formerly inflicted by the territorial law. With the certainty, if detected, of having this severe penalty imposed, people heretofore engaged in illicit distilling are somewhat more careful.

During the year there appeared to be a growing tendency on the part of some of the Chinese residents within the Territory to evade the rigors of the Chinese exclusion act, and the immigration officials of the district have been kept busy endeavoring to prevent such evasions, meeting with success. They have usually taken the form of a Chinaman claiming citizenship in the United States by virtue of birth in the Hawaiian Islands. I understand that there will be concerted action on the part of the Territory and the United States to ferret out these frauds, and to have them severely punished when discovered.

During the year there were instituted two cases under the Sherman antitrust act, under the direction of the Attorney-General of the United States. Both cases have been at a standstill for some time owing to the fact that the court has had under advisement for a considerable period some legal questions involved. It is anticipated that a decision on them will be had at an early date.

I feel that you will be interested to have my views on the effect which at least one of the laws adopted by the last Congress will have on work in the future. I refer to the pure food bill. Its operation within the Territory of Hawaii will be different, in my opinion, from its operation in any other district of the United States. Drugs, food-stuffs, and liquors consumed by the Orientals may be pure and wholesome according to their standards, but not according to the standards fixed and established by the act. Just what the result will be on oriental merchants here of a rigorous enforcement of the law is at present difficult to determine. It is certain, however, that many complications will arise and many prosecutions result.

#### THE FEDERAL COURT.

[By Hon. SANFORD B. DOLE.]

Herewith is a statement of cases brought in the district court of the United States in and for the Territory of Hawaii, both for the

year ended June 30, 1905, and the year ended June 30, 1906. It will show the work of the court in the most available and interesting form for reference by those interested in the subject.

## CIVIL CASES.

Year ended June 30, 1905.		Year ended June 30, 1906.	
Admiralty.....	7	Admiralty.....	30
Equity.....	5	Bankruptcy.....	31
Bankruptcy.....	26	Civil (United States cases).....	9
Civil (United States cases).....	16	Total.....	70
Habeas corpus.....	3		
Total.....	57		

## CRIMINAL CASES, 1905.

Offenses.	Number.	Convicted.	Acquitted.	Still pending.	Nol- prossed.
Adultery.....	10	9			1
Assault on high seas.....	2	1			1
Bigamy.....	1	1			
Causing fraudulent money order to be presented for payment.....	1				1
Conspiracy.....	7	5			2
Concealing distilled spirits.....	3	2			1
Depositing in post-office nonmailable matter.....	1	1			
Embezzlement.....	6	3		1	2
Forgery of money order.....	2	2			
Forcibly breaking into post-office.....	1	1			
Illicit distilling.....	7	7			
Making false statement regarding debt of seaman.....	2	1	1		
Making entry of dutiable merchandise by false statement.....	1	1			
Peonage.....	4	3			1
Perjury.....	1	1			
Personating United States officer.....	4		2		2
Retail liquor dealer without paying tax.....	3	1			2
Stealing from mails.....	1	1			
Unlawful cohabitation.....	2	2			
Unlawfully issuing money order.....	3	1		1	1
Violation of internal-revenue law.....	4	4			
Total.....	66	47	3	2	14

## CRIMINAL CASES, 1906.

Offenses.	Number.	Convicted.	Acquitted.	Still pending.	Nol- prossed.
Adultery.....	4	3		1	
Assault on high seas.....	2	1			1
Attempting to pass counterfeit note.....	4				4
Bigamy.....	8	4		4	
Conspiracy.....	7	3	1		3
Conspiracy to pass counterfeit note.....	2	2			
Embezzlement.....	2	2			
Fornication.....	1	1			
Forgery of money order.....	1	1			
Having possession of counterfeit coin.....	2	1	1		
Illicit distilling.....	2	2			
Importing women for prostitution.....	1	1			
Larceny.....	1	1			
Making and having possession of counterfeit coin.....	2	2			
Having possession of and passing counterfeit coin.....	1	1			
Personating United States officer.....	1	1			
Receiving and retaining postage stamps stolen from post-office <sup>a</sup> .....	1				
Smuggling.....	2	2			
Violation of passenger act.....	3	3			
Unlawfully carrying on business of brewer.....	1	1			
Total.....	48	32	2	5	8

<sup>a</sup> Defendant not found.



## SUMMARY (YEARS ENDED JUNE 30, 1905, AND JUNE 30, 1906).

	1905.	1906.	Total.
Civil cases.....	57	70	127
Criminal cases.....	66	48	114
Grand total.....	123	118	241

## ANALYSIS OF CRIMINAL CASES.

Number.....	66	48	114
Convicted.....	47	32	79
Acquitted.....	3	2	5
Still pending.....	2	5	7
Nol-prossed.....	14	8	22
Defendant not found.....		1	1

## CASES APPEALED.

Appealed to circuit court of appeals for ninth circuit:		
By libellee.....		6
By Government.....		3
Appealed to Supreme Court of United States:		
By petitioner.....		1
		10
Affirmed.....		2
Not yet decided.....		8
		10

## FEDERAL CLIMATOLOGICAL SERVICE.

[By WM. B. STOCKMAN.]

The central station of the Hawaiian section, climatological service of the Weather Bureau, United States Department of Agriculture, occupies as office quarters four rooms on the second floor of the Alexander Young Building, King street side. The instrumental equipment is the same as supplied to the first-class stations of the United States Weather Bureau on the mainland of the United States. Appropriate instruments are exposed on the roof of the King street tower of the Young Building, and consist of a 6-foot wind vane and a Robinson anemometer mounted on an 18-foot iron support; maximum, minimum, dry-bulb, and wet-bulb thermometers, and a recording thermograph, exposed in a shelter, the four sides of which are of slats (louver), admitting of free circulation of air about the thermometers, the bottom closed and the roof double, between the upper and lower portions of which is an open space about 6 inches in height for ventilation. Upon the apex of the instrument shelter a thermometric sunshine recorder is exposed. The wind vane and anemometer support and the instrument (thermometer) shelter are erected upon a platform which stands 6 feet above a tar and gravel roof, the bottom of the instrument shelter being about 10 feet above the platform. Other platforms, situate on different portions of and raised but a few inches above the roof, are erected for the exposure of the recording rain gauge and a stand upon which is placed a nephoscope for cloud observations. The wind vane, anemometer, rain gauge, and sunshine recorder are electrically connected with an instrument (meteorograph) in one of the office rooms. Among other features this meteorograph consists of a cylinder upon which is placed at noon each day a sheet ruled



off into five-minute and hour spaces. On this sheet is recorded each minute the direction of the wind to eight points; every minute of sunshine; every mile of wind—the velocity of which can also be determined; and every one one-hundredth inch of rainfall and the character thereof, as to whether light or heavy. The time of the occurrence of the several elements is indicated by the ruled time lines. Together with the meteorograph there are also displayed in the room standard mercurial barometers, a barograph, different styles of psychrometers (for determining the dew point, relative and absolute humidity, and vapor tension of the atmosphere), sunshine recorders and thermometers, and an anemometer. The thermograph and barograph, respectively, continuously record the temperature of the free outside air and the pressure of the atmosphere, and from these records, together with the data recorded by the meteorograph, the meteorological conditions obtaining throughout the day are extracted and entered upon appropriate forms and filed at the station. The original, or copies of these forms, are transmitted to the central office of the Weather Bureau at Washington, D. C.

Eye observations are made twice daily, at 8 o'clock local mean time, of the meteorological conditions obtaining at the time, the principal features of which are cabled to San Francisco, whence they are telegraphed to Washington, D. C., and other important cities of the United States for publication on the daily weather maps and in other reports of the several stations. These eye readings also act as checks on the accuracy of the several recording instruments.

Summaries are made of the hourly, weekly, monthly, and annual values of the several meteorological elements and published in the local newspapers and also by this office.

Substations of the Hawaiian climatological service are located on the several islands. From these substations reports are received, some weekly and all monthly, as a whole or in part, of the highest and lowest temperatures, amount of rainfall, prevailing wind direction, and general character of each day, together with other meteorological phenomena. These reports are summarized and issued to the public in the form of a weekly bulletin, setting forth the general character and especial features of the week last past, and a monthly report, which contains tables giving the highest and lowest temperatures and amount of rainfall on each day, a condensed, summarized table of the general conditions obtaining at a number of selected stations having the necessary data, a summary of the conditions as a whole for each of the six principal islands and for the entire group, and charts of each of the six islands, upon which lines are drawn showing the districts where the temperature and rainfall conditions have been practically the same during the month under discussion. An annual summary of the monthly reports is also issued. These publications are given a wide distribution throughout these islands and the United States, and quite a number are sent to foreign countries. Copies of these publications can be had on request.

On June 30, 1906, reports were received from the following substations:

Island.	Temperature observers.	Rainfall observers.	Weekly correspondents.
Hawaii.....	27	57	28
Mauī.....	16	23	8
Oahu.....	21	40	7
Kauai.....	6	28	6
Molokai.....	3	3	1
Lanai.....	1	1	.....
Total.....	74	152	50

Of these substations, 48 of those reporting temperatures and 52 reporting rainfall are equipped with Weather Bureau standard maximum and minimum thermometers, thermometer shelter, and 8-inch rain gage. As soon as additional instrumental equipments are available efforts will be made to establish substations in the various portions of the several islands from which reports are not now being received.

With and subsequent to the issue of the bulletin for the week ended March 17, 1906, all reference to crops and their conditions have been omitted from the publications of this section.

It was my desire to include some comparative figures of the rainfall and temperatures on the several islands and the different portions thereof, but it has not been possible to get the data in shape for publication.

## PROGRESS OF VARIOUS ENTERPRISES.

### HAWAII'S TRANSPORTATION FACILITIES.

[By H. P. Wood.]

A glance at the chart recently issued by the Hydrographic Office of the United States Navy Department, giving tracks for full-powered steam vessels, shows Hawaii as the hub of a wheel whose spokes radiate in every direction.

A notable improvement in the transportation facilities across the Pacific Ocean has been made during the past few years and Honolulu, being located at the crossroads of the great ocean trade routes, naturally benefits largely by the better service and resultant increased travel.

Hawaii now has regular and direct steamship connection with China, Japan, the Philippines, Australia, New Zealand, Samoa, Fiji, and the principal ports of California and Oregon on the mainland of the United States.

A line of steam freighters is employed in conveying large shipments of sugar to the Atlantic coast, returning with miscellaneous cargoes. The long route via the Straits of Magellan will soon be abandoned, however, for a more direct and quicker service by way of the Isthmus of Tehuantepec. The harbor works at Salina Cruz, on the Pacific, and Coatzacoalcas, on the Atlantic, are rapidly nearing completion and by the end of December, 1906, the Tehuantepec National Railway will be in a position to handle traffic between the two oceans economically and quickly, thus placing Honolulu directly on the line of what

must rapidly become one of the most important of the world's great trade routes.

The steamship lines now in operation on the Pacific and making Honolulu a regular port of call are:

American-Hawaiian Steamship Company.  
 Canadian-Australian Steamship Company.  
 Matson Navigation Company.  
 Oceanic Steamship Company.  
 Pacific Mail Steamship Company.  
 Toyo Kisen Kaisha.

The American-Hawaiian is the freight line before mentioned, which maintains communication between the Atlantic and Pacific coasts.

The Canadian-Australian Steamship Company dispatches a steamer every four weeks from Vancouver, British Columbia, and Sydney, Australia, the boats calling regularly at Honolulu, Suva, Fiji, and Brisbane. The steamers of this line—the *Aorangi*, *Miowera*, *Moana*, and *Maheno*—make the 7,265 miles between terminal ports in about twenty-four days. The *Maheno* is a turbine steamer and has done so well in her first few runs across the Pacific that the company has given orders for two additional steamers of the same class to be used on this route.

The Matson Navigation Company operates two steamers—the *Hilonian*, 1,819 tons, and the *Enterprise*, 1,681 tons—each having good accommodation for between twenty and thirty first-class passengers. The *Enterprise* sails regularly between San Francisco and Honolulu, calling at Hilo, on the island of Hawaii, on the return trip. The *Hilonian* makes the same ports, and also includes Portland, Oreg.

The Oceanic Steamship Company operates four steamers on the Honolulu run, i. e., the *Sierra*, 6,200 tons; *Sonoma*, 6,200 tons; *Ventura*, 6,200 tons, and *Alameda*, 3,200 tons. The first three steamers maintain a twenty-one day service between San Francisco and Sydney, stopping regularly at Honolulu, Pago Pago, and Auckland. These boats have accommodation for 200 first-class and 100 second-class passengers. The steamship *Alameda* of this line plies between San Francisco and Honolulu only. The round trip, including stays in port, consumes twenty-one days, dates of sailing being intermediate with those of the through steamers.

The Pacific Mail Steamship Company has a fleet of five modern steamers in the trans-Pacific trade, viz, *Manchuria*, 27,000 tons; *Mongolia*, 27,000 tons; *Korea*, 18,000 tons; *Siberia*, 18,000 tons, and *China*, 9,000 tons. All of these five boats make Honolulu a regular port of call. During the past year this company has been operating on the same run the *Coptic*, 4,700 tons, and the *Doric*, 4,500 tons, under the name of the Occidental and Oriental Steamship Company.

The Toyo Kisen Kaisha, a Japanese company, whose steamers were for a time utilized as transports by the Japanese Government, are again making Honolulu a regular port of call. The boats of this line—the *American Maru*, *Hongkong Maru*, and *Nippon Maru*—are each of 6,000 tons burden.

Steamers of the allied three last-named companies leave San Francisco for the Orient via Honolulu about once in every eight days throughout the year. All through steamers, as a usual thing, so arrange their schedule as to arrive at Honolulu in the morning, staying in port from eight to thirty hours.



Everything in the equipment of the steamships plying across the Pacific is of the most modern type. The boats are large, speedy, comfortable, comparing most favorably with the best Atlantic liners. All parts of the ships are lighted by electricity. The dining saloons are large and beautifully decorated. The social halls and smoking rooms are roomy, and perfect in their appointments. All staterooms are supplied with every convenience and are well ventilated. The bathrooms and lavatories are numerous and are kept scrupulously clean. In fact the requirements of the most fastidious traveler have been carefully studied and provided for in a satisfactory manner.

In addition to the steamship service a number of swift sailing vessels, fitted specially for passenger traffic, ply regularly between Honolulu and Pacific coast ports.

Since the discovery of practically unlimited supplies of fuel oil on the coast of California the different industries throughout the islands have become large consumers of this product, two lines of tank steamers being regularly engaged in supplying the Honolulu market.

The world's greatest development is now taking place in the countries bordering on the Pacific Ocean. New trade routes, such as will be opened up by the short transcontinental haul across the isthmus of Tehuantepec and the operation of the Panama Railway by the Government of the United States on equal terms to all, must add greatly to the prestige of Hawaii, and will tend to make of Honolulu the clearing house of the Pacific, even prior to the completion of the Panama Canal.

Hawaii is also in the center of the Sunshine Belt across the Pacific, and the climate and scenery of the islands are so attractive that an ever increasing number of tourists and homeseekers must continue to come to these hospitable shores, particularly as the ocean voyage can now be made so easily and comfortably.

It should also, perhaps, be stated here that the transportation facilities for freight and passenger business between the different islands comprising the Territory of Hawaii are both ample and satisfactory.

The following table shows the arrivals and departures of first and second class passengers at Honolulu, respectively from and for the points designated, for the year ended June 30, 1905:

Date.	Australia.	British Columbia.	Orient.	San Francisco.	Total.
<i>Passengers arrived.</i>					
1905—July .....	25	12	21	268	326
August .....	5	20	5	175	205
September .....	14	14	16	296	340
October .....	17	16	12	256	301
November .....	15	42	17	365	439
December .....	19	11	15	451	496
1906—January .....	22	6	22	240	290
February .....	15	30	14	360	419
March .....	11	5	21	316	353
April .....	28	1	24	116	169
May .....	5	13	21	262	301
June .....	7	13	42	169	231
Total for year .....	183	183	230	3,274	3,870

Date.	Australia.	British Columbia.	Orient.	San Francisco.	Total.
<i>Passengers departed.</i>					
1905—July .....	12	37	12	290	351
August .....	2	25	15	325	367
September .....	7	12	12	257	288
October .....	7	6	26	164	203
November .....	5	9	25	145	184
December .....	8	9	19	110	146
1906—January .....	7	6	12	215	240
February .....	1	11	62	161	235
March .....	3	12	80	338	433
April .....	5	30	12	344	391
May .....	9	2	21	220	252
June .....	2	11	27	199	239
Total for year .....	68	170	323	2,768	3,329

Excess arrivals over departures, 541.

*Table of distances by full-powered steam vessels from Honolulu to the leading ports of the Pacific.*

	Miles.		Miles.
Acapulco .....	3,310	Punta Arenas .....	6,379
Apia .....	2,240	Salina Cruz .....	3,580
Auckland .....	3,850	Sandakan .....	4,980
Bonham Island .....	2,098	San Diego .....	2,280
Callao .....	5,147	San Francisco .....	2,100
Christmas Island .....	1,075	San Pedro .....	2,250
Guam .....	3,337	Seattle .....	2,400
Hongkong .....	4,961	Shanghai .....	4,333
Jamestown Harbor .....	2,602	Sitka .....	2,395
Levuka .....	2,736	Sydney .....	4,424
Manila .....	4,803	Tahiti .....	2,389
Midway Island .....	1,160	Unalaska .....	2,016
Pago Pago .....	2,263	Ualan .....	2,445
Paita .....	4,777	Valparaiso .....	5,916
Panama .....	4,665	Vladivostok .....	3,736
Petropavlovsk .....	2,770	Wellington .....	4,163
Portland .....	2,250	Yokohama .....	3,445

Honolulu to New York, via Cape Horn, 14,970 miles; Magellan Strait, 13,200 miles; Panama, 6,690 miles; Salina Cruz, 5,500 miles.

*Rates of fare from Honolulu.*

To—	First-class.	Second-class.	Steerage
Auckland .....	\$125.00	\$90.00	\$75.00
Brisbane .....	150.00	90.00	62.50
Hongkong .....	175.00	.....	100.00
Manila, by direct steamer .....	175.00	.....	100.00
Manila, via Hongkong .....	<sup>a</sup> 22.00	.....	.....
Pago Pago .....	85.00	65.00	50.00
San Francisco .....	75.00	50.00	30.00
Shanghai .....	175.00	.....	100.00
Suva, Fiji .....	100.00	75.00	50.00
Sydney .....	150.00	90.00	62.50
Vancouver .....	75.00	45.00	25.00
Victoria .....	75.00	45.00	25.00
Yokohama .....	150.00	.....	85.00

<sup>a</sup> Additional.

The cost per mile of first-class fare between Honolulu and the ports named below, in cents, is as follows:

San Francisco, 3.57; Victoria, British Columbia, 3.05; Pago Pago, 3.75; Auckland, 3.776; Sydney, 3.39; Suva, 3.655; Yokohama, 4.35; Hongkong, 3.548; Shanghai, 4.039; Manila, direct, 3.64, via Hongkong, 4.1.



## OAHU RAILWAY AND LAND COMPANY.

[By WALTER F. DILLINGHAM.]

During the past twelve months the Oahu Railway and Land Company has constructed and put into operation a branch line of railway 10 miles in length extending from the Waipahu station up the Waikakalaua gulch to the farm colony town-site of Wahiawa. The branch starts from the main line at a point a few feet above sea level and the highest point reached is at the colony settlement, which is 923 feet above sea level. The maximum grade is 3 per cent. The rails are 48-pound American steel. The ties are redwood and on the curves ohia wood. The gulch up which the branch line runs cuts through the center of the Oahu plantation. Above the plantation boundary the road crosses the grazing land of Hoacae and Waipio and enters the government lands of Waianae uka, which extend to the Kaukonahua stream and colony boundary. The inducement for the construction of this road at this time is the rapid development of the pineapple industry at Wahiawa. Small settlers have taken up homestead lands, and these lands, together with the adjoining government land of Waianae uka, have been brought under the control of several planting and canning companies. There are now under cultivation some 1,300 acres of land, and it is anticipated that during the next two or three years a large portion of the table-land between the Oahu plantation and Waialua plantation, consisting of approximately 14,000 acres of arable land, will be under cultivation. A large portion of this table-land which is made accessible by this branch of railroad, while not suitable for pineapple raising owing to lack of water, is well adapted to the growing of sisal. Plans are under way for the forming of a company to push forward this new industry. The freight output of Wahiawa colony in 1905 was approximately 2,500 tons. It is estimated that this output will be increased during the next four or five years to more than 10,000 tons per annum. The cost of the line is approximately \$140,000.

## KOOLAU RAILWAY COMPANY.

This company was incorporated on August 9, 1905, and the contract with the superintendent of public works entered into on August 25 of the same year. Under its charter the company is authorized to build a line of steam railroad from Kahuku Mill, which is situated at the most northerly point of the island of Oahu, in a southeasterly direction along the coast through Koolauloa, Koolaupoko, and on to Honolulu. Shortly after the granting of the charter the work of procuring rights of way was commenced, but owing to the fact that the location of the line necessitated the crossing of many small holdings and through lands under the cultivation of rice the usual delays and difficulties have been experienced. Rights of way have now been secured as far as Punaluu, a distance from Kahuku Mill (the point of commencement) of 10 miles. The grading is well under way and it is expected that the road will be in operation for freight and passengers by November 1, 1906. The rails are American steel, 35 pounds. Ties are California redwood, and the gauge the same as the Oahu Railway and Land Company's standard, 3-foot. This line connects with the main line of the Oahu Railway and Land Company at Kahuku. The Koolau Railway opens up for agricultural purposes tracts of land above the rice land

now under cultivation. The area of new land made available by the construction of the railroad from Kahuku to Punaluu is approximately 1,000 acres. Transportation facilities are afforded the rice planters, who have in this first 10 miles about 1,500 acres under cultivation. By continuing the line through Koolaupoko, the lands of Kaneohe, Kaalaea, and Heeia are furnished with transportation facilities, making possible the development of lands which up to the present time have only been used for grazing purposes. The estimated area of grazing land which becomes available for agricultural purposes amounts to from 3,000 to 4,000 acres. The policy of the Koolau Railway Company, so far as extending its line across the district of Koolaupoko, will depend largely upon the success of the plan of interesting small settlers in the taking up of these new lands.

The extension of the Oahu branch line to the Wahiawa colony and the extension of the main line through the construction of the Koolau railroad line marks a direct step toward the opening up of lands available for small farmers. Up to the present time the direct inducement to railroad companies for the construction of lines has been the development of large sugar corporations; but this year's work is consistent with the growing idea of offering lands with transportation facilities to small citizen settlers in the Territory.

#### IRRIGATION IN HAWAII.

[By J. T. McCrosson.]

The plantations of the Kohala and Hamakua districts are among the oldest and have been in years past among the most productive of nonirrigating plantations on these islands. Owing to the destruction of the forests on the highlands behind the plantations the rainfall during the last twenty-five years has been constantly decreasing, and notwithstanding an increase in acreage the annual output in sugar has greatly diminished.

The Kohala Mountains, between 4,000 and 5,000 feet elevation, and lying directly in the path of the rain clouds forced by the trade winds between the high mountains of Mauna Kea, on the island of Hawaii, and Haleakala, on the Island of Maui, furnish one of the best watersheds on these islands. It has long been the desire of the owners of the various plantations in Kohala and Hamakua to obtain a water supply for domestic and irrigating purposes, because during many of the seasons of drought the Hamakua plantations in particular have been compelled to cart water from the mountain streams for the purpose of supplying their laborers and animals with this most needful liquid.

One of the first attempts to investigate the watershed under discussion was made during the summer of 1880, when George C. Williams, then manager of the Kohala plantation, commissioned the writer to ascertain the feasibility of obtaining water for fluming purposes for the above plantation. A most bountiful supply was found to exist in the numerous permanent streams, but owing to the excessive cost of bringing the same onto the plantation and the lack of cooperation among the various interests in Kohala Mr. Williams abandoned the proposition. In 1883 or 1884 Mr. H. P. Baldwin, in company with Mr. Schussler, of San Francisco, made a partial investigation of the Kohala Mountains from the Hamakua side for the

purpose of furnishing water to the plantations in Hamakua. Owing to more important business requiring Mr. Baldwin's attention on Maui the investigation was dropped.

In 1888-89 the Hawaiian government, through Mr. J. M. Lidgate, made a thorough examination of the upper portion of the Kohala Mountains in Hamakua for the purpose of furnishing water for fluming and domestic purposes to the Hamakua plantations. Mr. Lidgate found that a daily supply of about 7,000,000 gallons could be obtained from the high elevations where he proposed locating his ditch. This water would have come from the Waipio streams, but he stated that it would not in any way interfere with the valleys below, as at no time would the 7,000,000 gallons proposed to be taken "exceed the one-hundredth part of the Waipio system."

The next investigation made in these mountains was conducted by Mr. W. W. Bruner, in 1892, for the Hawaiian government, and was made from the Kohala side of the mountains for the purpose of furnishing a domestic supply to the plantations and homesteads in the Kohala district. This survey, like that of Mr. Lidgate, was made near the top of the watershed under investigation, and to keep up the parallel the report and maps were carefully stored away in the archives of the minister of the interior.

The impetus given the sugar business by annexation to the United States caused some of the plantations in Kohala to install expensive pumping machinery to raise water for irrigating their cane lands. This indication that the plantations were in earnest in their desire for water induced the writer to visit Hawaii in 1900, and to make a more extended investigation into the quantity of water to be obtained and the approximate cost of conducting the same to homesteaders and plantation consumers. After spending several months studying the situation, I became convinced that it would prove a good commercial proposition to conserve the mountain water then running waste into the sea, leading it to consumers in the districts east and west of the watershed.

During 1901 and part of 1902 the Bernice P. Bishop Museum trustees and the trustees of the Bishop estate made the most thorough and exhaustive examination of the Waipio and Honokane water resources that has ever been made in the Kohala Mountains. Very fortunately this investigation was made during one of the most severe droughts that has been recorded in Kohala or Hamakua, and the data can be relied upon as being the minimum flow of the streams gauged.

Early in 1901 an application was made by Col. S. Parker, the lessee of a considerable portion of the Kohala Mountains, to the territorial government for a franchise or license to take the water from the government land in the Kohala Mountains for the purpose of conducting the same to homesteaders and plantation consumers. Almost immediately after it became known that Colonel Parker and his associates had applied for a franchise to develop the water in question, numerous other applicants and claimants appeared, all asking for the franchise and expressing their willingness to spend their time and money for the benefit of the people of Kohala and Hamakua.

After three years of investigation in Honolulu and Washington as to the rights of the various claimants, the matter was brought to an issue by the territorial officials submitting the franchise to public



competition at an upset price. The agent of Colonel Parker and associates became the purchaser, and in the latter part of January, 1905, work was commenced on the Kohala ditch.

This ditch consists of two sections. The first section from Hawi plantation to Honokane (the first large mountain stream) is more than 13 miles in length, and consists of 9 miles of tunnels, one-half mile of fluming, and 4 miles of open ditching. The tunnels and open ditching are all lined with concrete or stone set in cement mortar, making a permanent job and reducing seepage to a minimum. This first section was completed on June 1 of this year and is now supplying its consumers with an average of 19,000,000 gallons daily. The ditch has a capacity of 70,000,000 gallons daily, and delivers the water on the plantations at an elevation between 1,000 and 950 feet.

The second section of the Kohala Ditch runs easterly from Honokane to Laupahoehoe No. 2, and is  $6\frac{1}{2}$  miles long, being nearly all tunnel. This work will be completed early in 1907 and will furnish sufficient water to develop at least 6,000 acres of new land between Hawi and Mahukona. There are many thousands of acres of good land belonging to the government which will be made most valuable by the completion of the Kohala Ditch proper and the construction, later, of an auxiliary ditch at a much higher elevation, which will be capable of carrying off the storm waters in the mountains and storing them in suitable reservoirs, from which they can be conducted to the homesteader and planter below. The present ditch is capable of caring for only a small portion of the water that at times runs waste to the sea.

In March of the present year the Hamakua Ditch Company began the construction of the Hamakua Upper Ditch, which will take water from the Kohala Mountains in Puukapu for the use of the homesteaders and planters in Hamakua to flume the cane from the highlands to the mills. This ditch will mean success to the many homesteaders now located in Hamakua. The cost of carting their cane to the mills is so great that many of them have been compelled to give up planting, but with a prospect of obtaining water for fluming purposes many of the people are again going into cane planting. I may here mention that the management of the plantations in Hamakua are doing everything in their power to encourage the homesteaders, offering them free water for fluming and remunerative prices for all cane grown by them.

The Hamakua Lower Ditch has not gone further than the preliminary surveys. Actual construction work will probably be commenced within the next two months. The completion of these two ditches in Hamakua will mean much for that district, insuring a good crop annually and taking the plantations out of the speculative category in which they have been for so many years.

The combined cost of the Hamakua upper and lower ditches will exceed \$1,000,000.



## ELECTRIC INSTALLATION IN THE TERRITORY OF HAWAII.

[By A. GARTLEY.]

There are but two central station light and power companies in the Territory of Hawaii, one in Hilo and one in Honolulu.

The Hilo plant is a water-driven plant operated with Pelton water wheels, the combined capacity of the wheels being 750 horsepower. The electric equipment of the station consists of three alternating-current generators, delivering 2,100-volt, 2-phase current of 7,200 alternations. These are Westinghouse generators and have a combined capacity of 450 kilowatts. Light is supplied from a 105-volt service and 2-phase power is supplied from the same machines and a monocyelic.

Light and power is supplied commercially in Honolulu by the Hawaiian Electric Company, Limited. The station is a steam-driven station, there being three 2,200-volt, 2-phase, 7,200 alternations per minute, Westinghouse generators of 850 kilowatts capacity, and three 500-volt, direct-current Westinghouse power generators of 400 kilowatts capacity. Lighting is supplied from alternating-current machines on a 2,200-220-110-volt service, and power is supplied from direct-current machines of 500 volts. The company is supplying more than 2,000 customers and has connected to its service 36,000 16-candle-power incandescent lamps, 225 arc lamps, and 520 horsepower in motors.

The Territory of Hawaii operates a water plant for furnishing lights to the territorial buildings and arc lights for street lighting purposes. This plant is situated in Nuuanu Valley. At present there are installed one 200-kilowatt, 3-phase, 7,200 alternations, Westinghouse alternating-current generator, direct connected to a Pelton water wheel, with one 200-kilowatt Westinghouse generator as an auxiliary.

The only street-railway plant in operation in the islands is the plant of the Honolulu Rapid Transit and Land Company in Honolulu. This plant is equipped with three 300-kilowatt, engine-driven, 500-volt, Westinghouse railway generators and 47 cars equipped with double equipments of 35-horsepower Westinghouse motors.

Aside from these stations electricity is quite extensively used in individual plants scattered throughout the islands, particularly steam-driven, direct-current plants on the sugar plantations. These individual plants vary in size from 5 to 225 kilowatts each.

There are also five alternating-current generating plants installed for supplying current to motors driving pumps for irrigating purposes.

The earliest pumping installation was at Waianae plantation on the island of Oahu. Here water is delivered to Pelton water wheels under a static head of 400 feet, driving two 200-kilowatt, 3-phase generators. The power is transmitted a distance of 5 miles and utilized in operating one fly-wheel pump belted to a 75-horsepower motor, lifting 1,500,000 gallons of water every twenty-four hours to a height of 150 feet. Another pump belted to two motors of 150-horsepower each delivers 5,000,000 gallons of water to a height of 280 feet. The entire plant is a general electric plant, with the exception of the 75-horsepower motor, which was built by the Westinghouse Company.

The Pioneer Mill Company, at Lahaina, Maui, has installed a 250-kilowatt, 3-phase, general electric, alternating-current, 6,600-volt

generator direct connected to a Pelton water wheel operating under a static head of 365 feet. Power is transmitted a distance of 6 miles to a pumping station, where current is used to operate a 200-horsepower, 440-volt motor belted to a triplex pump, which delivers 9,000,000 gallons of water against a 100-foot head.

At the plantation of the Oahu Sugar Company on the island of Oahu a small generating plant is installed adjacent to the pipe line of one of the high lift pumps, and water which is taken from the pipe line for irrigation on the lower levels is utilized to produce power for operating a pump some 2 miles distant. This plant consists of one 120-kilowatt, 3-phase, 2,200-volt Westinghouse generator belt, driven from a Pelton water wheel. The current is transmitted to a pumping station and used in a 100-horsepower, 2,000-volt Westinghouse motor to operate a centrifugal pump.

During the past year a large pumping installation has been placed on the plantation of the Makee Sugar Company, at Kealia, Kauai, which is rather unique in its design. Water is supplied from a small mountain stream having from 5 to 8 cubic feet per second flow and a head of 400 feet, the peculiarity of the system being the use of a variable-speed water wheel and electric transmission at variable voltage and variable frequency with constant current. The plant is designed to utilize the entire flow of water in the stream by adjusting the speed of the motor driving the pump to suit. The arrangement used to accomplish this control wholly from the generating station is by variation of the line voltage and frequency, the water heads at both the power and pump being constant, the amounts of water pumped vary in direct ratio to the flow of water to the power house. A reciprocating flywheel pump is installed, and it is therefore necessary to vary the speed of the motor in direct proportion to its load, assuming that this can be done without a material reduction of efficiency in the motor. At the power-generating end there is a special Pelton water wheel having six Pelton disks of different diameters, so that with a constant spouting velocity and different quantities of water and constant bucket speed, six different speeds in revolution are obtained. A 300-kilowatt generator is coupled directly to the water wheel and has an output varying directly with the speed. The generator is supplied with a constant magnetic current from a separate exciter, and the voltage produced by the generator and its frequency will, therefore, vary with the number of the revolutions. The current generated and sent out over the transmission line should, therefore, be substantially constant. The speed varies, depending upon the available water supply and the particular Pelton disk that is used. The voltage and frequency increase or decrease as the speed increases or decreases. An automatic regulator maintains the voltage of the exciter constant.

At the receiving end, 5 miles from the power house, a 225-horsepower, 3-phase induction motor is rope-belted to a duplex flywheel Riedler pump. This pump is to operate against a gross head of 250 feet and deliver 2,800 gallons of water per minute at a maximum of 116 revolutions per minute. The head remains constant and should the generating plant reduce its speed and the voltage and frequency be reduced this induction motor would have a corresponding reduction in speed and pump less water. It is estimated by the builders that an efficiency can be maintained of 48 per cent, from water to water.

This plant has not yet been completely tested out and it is impossible at the present time to predict what efficiencies will obtain throughout such a wide variation in speeds of the different apparatus. All this apparatus was supplied by the Allis-Chalmers Company.

This power plant also operates a 100-horsepower Westinghouse motor in the mill and several smaller motors.

By far the most important electric development which has taken place in the Territory of Hawaii has been the installation of a high-tension transmission plant by the Kauai Electric Company on the island of Kauai. The object of this plant is to generate power from a mountain stream in Wainiha Valley and utilize the same in operating pumps on the plantation of the McBryde Sugar Company, a distance of 35 miles.

Water is taken from the Wainiha stream at an elevation of 710 feet and carried through a conduit consisting of tunnels and ditches about 5 miles long to an elevation of 562 feet above the centers of the wheels at the power-house site.

At the power house there are two 1,200 kilowatt, 2,200 volt, 3-phase, 3,000 alternations per minute generators, each direct connected to a Pelton water wheel having two overhung Pelton disks forced to the ends of the generator shaft.

Current is stepped up through two banks of transformers to a voltage of 33,000 and carried over a 3-phase high-tension line of 103,850 circular mills aluminum cable for a distance of 35 miles.

The current is received at the McBryde plantation at a central station in Hanapepe Valley, where water has been developed by sinking shafts and extending tunnels. The current is stepped down through step-down transformers to 2,200 volts and carried to the different pumping stations, to be utilized in motors direct connected to pumps of the multiple stage centrifugal or turbine types.

At the present time there are installed and in operation on this service four large pumping units, consisting of two 500-horsepower motors connected to pumps of 5,000,000 United States gallons daily capacity each against a head of 341 feet; one 500-horsepower motor connected to a pump of 6,500,000 gallons daily capacity against a head of 260 feet; one 150-horsepower motor connected to a pump of 3,500,000 gallons daily capacity against a head of 168 feet.

Additional pumps are to be installed, of large capacity and high lift, one to be operated by a 1,000-horsepower motor and another by a 350-horsepower motor. A 150-horsepower motor is also to be used for developing purposes on the plantation, thus making a total motor installation of 3,300 horsepower to be operated from this plant.

The Kauai Electric Company is capitalized for \$300,000 and has an outstanding bond issue of \$150,000 of 6 per cent bonds. Counting fixed charges against this plant, it is estimated that the pumping cost can be reduced to one-third the cost of pumping by steam power.

It is hoped that many other uses will be found for electric current by the McBryde Sugar Company, including loading at the wharves and the operation of plows which are now operated with steam.

Further developments on the island of Kauai are in prospect, and it is safe to predict that ultimately there will be an electric belt line railway around fully two-thirds of the island of Kauai.



The Kauai Electric Company was financed by local people and the plant was designed and built by the Hawaiian Electric Company and the Honolulu Iron Works. The electric machinery was furnished by the Westinghouse Electric and Manufacturing Company and the water wheels by the Pelton Water Wheel Company.

Almost all the development which has been outlined above has taken place since the annexation of the islands by the United States.

A table is added which shows that American manufacturers of electric machinery have cause to congratulate themselves, as 99½ per cent of all the machinery in the Territory of Hawaii is of American manufacture. The only machinery outside of American machinery is that of Siemens-Halske, German manufacturers.

*Horsepower of electric apparatus, and manufacturers of same.*

	Westinghouse.	General Electric.	Bullock.	Siemens-Halske.	Other made in the United States.
A. C. generators.....	6,752	1,000	400	40	.....
D. C. generators.....	2,775	1,093	392	48	72
A. C. motors.....	3,913	666	200	.....	.....
D. C. motors.....	803	73	20	15	243
R. R. motors.....	3,340	140	.....	.....	.....
Total.....	17,583	2,972	1,012	103	315
Per cent of total.....	80	13.5	4.6	0.5	1.4

Total horsepower installed, 22,015.

#### AGRICULTURE AND FORESTRY.

[By DANIEL LOGAN.]

Since its reorganization, three years ago, under a statute creating the board of commissioners of agriculture and forestry, the agricultural bureau of the government of the Territory has developed a high degree of usefulness. Its four divisions—agriculture, animal industry, entomology, and forestry—are all being effectively conducted according to modern scientific standards by the commissioners through educated specialists in the respective lines. Some of the heads of divisions have their professional credentials from the Department of Agriculture, Washington. The division of agriculture acts in direct cooperation with the United States Agricultural Experiment Station at Honolulu.

Prior to the reorganization just mentioned, the bureau of agriculture had for some years maintained an invaluable entomological service. In conjunction with the sugar planters, it secured the services of Prof. Albert Koebele, a leading demonstrator of the method of combating insect blights and plant pests with their natural enemies—parasites that wage deadly warfare against such destroyers of vegetation. This scientist had already, before employment here, done a great deal for the salvation of the grape-growing and citrus fruit-raising industries of California. He has alternated his work in these islands—investigating visitations of pests and applying the antidotes thereto, besides creating an extensive collection of entomological specimens—with the exploration of distant countries in search of



beneficial parasites. For some years he had an able assistant in Dr. R. C. L. Perkins, now at the head of the planters' entomological service, whose title came to him recently in the form of the degree of LL. D. from Oxford University in recognition of his natural history researches and authorship.

Outside of its entomological work the functions of the old bureau were chiefly the maintenance of a nursery for the propagation of trees and plants, including the cultivation of a forest in the mountains behind Honolulu, together with the importation of trees, plants, and seeds. In this traffic with other countries a system of exchange, as well as purchase, was employed. The nursery and forest mentioned had received support from the public treasury for more than twenty years, but the entomological work had been of comparatively recent origin. There is no disparaging of the value of the services rendered in all those years when it was but a nucleus of the present comprehensive and symmetrical institution. It clothed a large area of bare mountain slopes and summits with a luxuriant forest. It created a botanical garden in Honolulu, which is one of the city's beauty spots. It furnished the inhabitants of town and country, by free distribution, with thousands of trees and plants to beautify their home plots. It effectually checked or totally extirpated many pests that, imported from abroad, had threatened to devastate the vegetation of the group. Though its organization and resources both were inadequate, it had a fairly liberal support in the biennial appropriation bills; also some enabling legislation for its protective work.

For about a quarter of a century the sugar industry, preponderating over all others in the production of wealth, has proved well able to take care of itself in scientific development, through the medium of an organization that has never lapsed or weakened. Incidentally the sugar planters' association has also promoted general agricultural interests by more or less attention to diversified products—stock raising and forestry. It has cooperated with the public bureau of agriculture, before and since the latter's reorganization, by liberal contributions to the employment of specialists, notwithstanding its establishing of a large experiment station of its own, which employs scientific experts of highest standing in such divisions as chemistry, entomology, and plant pathology. An instance of such liberality is the engagement by the association a few years ago to pay a moiety of the salary of the present superintendent of entomology and plant quarantine inspector, whose services in the latter capacity for many years at the port of San Francisco were esteemed so valuable by the board of agriculture of California that unusual inducements were required to bring him to Honolulu.

Appended to this report will be found an article by Mr. Hosmer, superintendent of forestry, which gives a résumé of the work of his division for the year under review. Some mention of the other divisions may here be made.

In his latest annual report to the board of commissioners, Mr. Alexander Craw, superintendent of entomology and inspector, says: "During the year 1905 there were examined 293 vessels, on which we found 104,829 packages of fruit, vegetables, etc., as freight, and during the same time we had 249 packages by mail." This work, including the fumigation of the merchandise, when found necessary, with hydrocyanic-acid gas and carbon-bisulphide fumes, was done

by Mr. Craw and Mr. C. J. Austin, his assistant inspector. Several notable instances of signal protection from pests through the inspection of imports are reported. In November and December various consignments of citrus fruits, aggregating 2,950 cases, arrived from China and Japan, which, being found seriously infested with injurious insects and diseases, were all destroyed by burning. Again, 150 orange trees infested with leaf-miners from Japan were burned.

Another great service was rendered to the Territory when Mr. Craw interfered with the attempted importation, for show purposes, of 14 large and living snakes, 5 of them the deadly rattler. To avoid legal complications, two of the commissioners of agriculture and the collector of customs paid to the importer the value of the reptiles, which forthwith were destroyed and their carcasses preserved among the exhibits of the bureau museum. Best of all, the incident led to an order from the Secretary of Agriculture, Washington, prohibiting the importation of snakes into Hawaii. As the superintendent says in his report, "The Hawaiian Islands have always been famed for their freedom from snakes, and our people and animals could wander with impunity through our valleys and over hills and mountains."

Mr. Jacob Kotinsky, a learned specialist, is the assistant entomologist, doing both laboratory and field work. His reports, made frequently to the board, are of great value, as also circulars for public information which he writes. He travels within the group occasionally to investigate pests in different localities. The breeding of beneficial insects, collected abroad by Professor Koebele, is a considerable part of the laboratory work. During the calendar year 1905 a total of 64 colonies of 24 species of insects, aggregating 5,000 specimens, were distributed over the four principal islands. When it is stated that the pest known as the cane-leaf hopper that caused a loss of over \$3,000,000 in a single sugar crop, has been effectually subjugated within the past few years by the combined efforts of the Territory's and the planters' entomologists, some idea of the importance of this particular service may be comprehended.

Latest in organization, the division of animal industry has given evidence of value to the Territory which can hardly be estimated as yet. Although the successive governments of the Hawaiian Islands for more than twenty years had employed veterinarians, both the support and the scope given to this service were rather limited. Now and then such an emergency as a visitation of glanders brought the services of the official veterinarian into prominence, which otherwise were of a desultory nature, excepting for the inspection of slaughterhouse stock. On July 1, 1905, negotiations begun by the Stock Breeders' Association ended in the board of commissioners securing the services of Dr. Victor A. Norgaard, V. S. (Copenhagen), furnished by the Bureau of Animal Industry in the Department of Agriculture in Washington and the Stock Breeders' Association, who on that date entered upon his duties as the head of a local division of animal industry in these islands. Doctor Norgaard immediately on taking office outlined in writing to the board a general policy to be pursued by him as Territorial veterinarian "in carrying out the law enacted by the last legislature for the suppression and eradication of infectious, contagious, and communicable diseases among the live stock in this Territory."

Passing over a large body of information and advice since communicated to the board by Doctor Norgaard, in special reports and in his regular report at the end of the year, relating to specific diseases and pests found by him among the live stock of the islands, special mention will here be given to but one subject on which the board, and through it the public, have been enlightened by the veterinary chief. It is a subject vitally affecting the animal industry of Hawaii, upon which both the subsistence and the prosperity of the inhabitants greatly depend. Doctor Norgaard has made a discovery that will undoubtedly lead to changes in the feeding of animals, from which a vast improvement in the live stock of the Territory may be expected.

After visiting the principal islands, Doctor Norgaard formed the general impression "that all classes of live stock in the islands fail, in a more or less pronounced degree, to attain the size and quality which the apparently perfect climatic conditions would warrant, and that the young stock matures slowly." "I was at first inclined," the veterinarian proceeds, "to ascribe this to inbreeding, but soon found that even where fresh blood has been introduced regularly the offspring frequently failed to attain the size and development which characterize similar breeds on the mainland and in other countries. Still, there seemed nearly always to be an abundance of feed, and such conditions as in other countries are considered detrimental to the development of stock—a more or less prolonged winter, for instance—were unknown here." Making a specific comparison between the conditions here and in the Southwestern States, which shows these islands to have a great advantage but with less favorable results in stock raising, Doctor Norgaard finds it evident that in Hawaii "something is lacking in the soil, and consequently in the feed, the absence of which prevents growth and development. I do not mean to imply," he explains, "that this is the case everywhere in these islands. There are no doubt places on certain islands and pastures on certain ranches, where the grasses contain everything required for the development of certain animals, but most frequently such localities are utilized for other purposes, and such pastures are generally used as fattening paddocks and not as breeding paddocks, and in neither case do the young animals obtain what they require. It was not until quite recently, however," Doctor Norgaard goes on to say, "that this deficiency in food was brought so forcibly to notice that it became evident that the losses therefrom were very great, and that measures should be taken to check the same." He mentions some of the effects of the malnutrition upon cows and calves, as noted below, and concludes that the discovered condition of "osteomalacia, or softening of the bones, is due simply to an insufficiency or total absence of lime salts in the food."

Right here is an opportunity to emphasize my appreciation of the great services rendered to our agricultural interests by the Federal officials stationed here. Doctor Norgaard, continuing on the subject of the discovery just mentioned, says: "The observation of this disease in certain sections of Hawaii and Maui at once threw light on a number of conditions throughout the islands which hitherto had been more or less mysterious, and when I was informed by Dr. Jared Smith, of the United States experiment station, that a number of chemical analyses of grasses from various parts of the islands had revealed a deficiency in lime salts, I felt convinced of having reached the root of many evils, and began to realize that much could be done to remedy them."



Here a brief summary of the evil conditions in question prevailing among the live stock on different islands may be presented. On the island of Hawaii a number of animals, especially calves, yearlings, and heifers with their first or second calf, have been dying. This is particularly the case on "Hilo grass" ranges, and even though these are covered with green, succulent grass and the animals eat an abundance thereof, they have the appearance of starving. They become weaker and weaker, and finally lie down and die, the death struggle often lasting twenty-four hours or more. While the post-mortem examination reveals no disease or infestation of parasites, the blood is thin, the muscles are pale and flaccid, and the bones are brittle as in tempered clay. In certain sections of Hawaii and Maui the veterinarian had noticed that fractures of bones in grown animals—cows, steers, bulls, and especially "bullock" horses—were more common than in most other cases. During the year he had seen or heard of at least twenty cases of broken legs, not counting any which might have occurred on lava flows, and he felt convinced that even though the surface of the islands for the greater part is rough and stony, so many fractures would not occur unless there was something materially wrong with the bones of the animals. Another disease of the bony system which prevails to a great extent is osteoporosis, or big head, in horses and mules. These animals, moreover, lack bone, develop slowly, and mature late, and unless grain fed or supplied with feed containing lime salts fail to attain size. There is an abundance of horses in the islands, but they are of little value for the reasons mentioned, and both mules and horses are constantly imported in considerable numbers. In the year 1905 over \$60,000 worth of mules were imported. With regard to sheep it is the same story. On Molokai all lambs are born strong and well developed, and so long as they receive plenty of lime salts through their mothers' milk they gain rapidly in size and weight. When weaned at 4 months the majority average 50 pounds in weight. But no sooner are the lambs weaned than an almost complete standstill in the development takes place. When 12 months old they weigh only from 60 to 70 pounds, the best lambs of the following season being heavier than the less good yearlings. In such conditions is found an explanation of the fact that the domestic supply of sheep does not satisfy the demand. There are approximately 100,000 sheep in the islands, yet in 1905 there were imported from California for the Honolulu market 3,013 carcasses of mutton, of a net value of \$13,341. As Doctor Norgaard says, it is not the actual loss by death which results in certain sections of the Territory from this deficiency in mineral matters in the grasses which is of most economic importance, but the incalculable waste of time and material resulting from an "unbalanced ration." Excepting this one deficiency, the veterinarian finds "that every other requirement for making this Territory an ideal place for live-stock raising is present."

The animal industry of Hawaii stands easily next to that of sugar production in importance. It supplies the bulk of the home consumption of fresh meats. There is a very great demand for horses and mules for draft and traveling purposes, as also for use by stock-range riders, which the domestic industry also in large part supplies. Therefore the untoward conditions affecting stock raising which the Territorial veterinarian discloses make a rather dismal picture. It



would be a poor result of the employment of a high order of professional skill, however, which went no further than revealing the bad conditions and did not indicate a remedy. This happily is not the case here. Doctor Norgaard has advised the board, with ample elaboration, as well as directly appraised stock raisers, of means whereby the depressing cause may be overcome.

Ascribing "the failure of the live-stock breeders to supply the local demand for all classes of live stock and their products to a more or less pronounced deficiency in mineral matters, especially phosphate of lime, in the soil and subsequently in the grasses of this Territory," he comes to the conclusion that there are two ways in which the deficiency can be made good: "Either by liming the soil or by giving the lime salts to the animals direct. As the first is out of the question, owing to the large acreage which would have to be treated, the administration of lime salts, in the form of licks, must be resorted to. \* \* \* The safest and cheapest method is to place an abundance of bone meal, mixed either with salt or with molasses, where the animals can have constant access to it." He relates an experiment made on a ranch on Hawaii this year which so well sustained the theory that the ranchman declared his intention of extending the method by distributing feeding boxes containing the prescribed compound to different parts of the range. Molasses is a cheap article here, and Doctor Norgaard indicates a source of supply of bone meal when, in advocating the conversion of waste products into pork, he says there are thousands of worthless animals now consuming a large proportion of the grasses of the islands, for which their hides and carcasses will never pay—wild cattle and goats, old cows, superannuated horses and donkeys, and ranged-out ewes—which could be killed, boiled down, and converted into pork when fed with molasses and roughage. In this connection he mentions the annual importation of hogs to the value of between \$35,000 and \$40,000.

The work of the division of agriculture is carried on by the Federal experiment station. This is to avoid duplication of effort. An appropriation of about \$8,000 was made by the legislature for assistance to the station. In the annual report of the board covering the year 1905 the following appears:

The most important work done by that station during 1905 has been the continuing of the tobacco experiment station at Hamakua. The experiment has met with a high degree of success. Tobacco of good quality and in quantity per acre amply sufficient to make it commercially profitable has been produced.

Examination of the product by a number of tobacco experts resulted in the verdict that the best samples would market either in Europe or the United States as the best high-grade tobacco. That the percentage of the high-grade article was not greater is undoubtedly due to lack of experience in curing the tobacco.

Mr. Jared G. Smith, special agent in charge of the station, in his report to the board for 1905, enters into details of the tobacco experiment. The station had paid much attention to horticultural work the same year. To assist and encourage the cultivation of citrus fruits it had prepared a bulletin on "Citrus Fruits in Hawaii," which has been issued by the Department of Agriculture, Washington. A press bulletin on "Rubber in Hawaii," one of the most promising of our new industries, was another output of the station. It was ascertained in the chemical department "that many of our fodders are deficient in lime," and a press bulletin on that subject was issued. Mr. Smith says on this subject: "Doctor Norgaard, the veterinarian

of the board of commissioners of agriculture and forestry, had at the same time arrived at the same conclusions regarding the deficiency of lime from a study of cattle fed on such forage. The work will be continued in conjunction with Doctor Norgaard, who has already rendered valuable assistance in furnishing samples for analysis."

The bureau of agriculture has established a library at its headquarters, on the grounds of the government nursery in Honolulu, which at the end of 1905 contained somewhat over 4,000 books and pamphlets, not including the current publications regularly received. It is maintained as a free reference library, open to the public daily.

All that is lacking now in the Territorial equipment for promoting Agriculture is an agricultural college upon a site extensive enough and with the requisite natural advantages for the widest range of cultivation of products adapted to the islands.

### DESCRIPTIONS OF THE COUNTIES.

#### COUNTY OF HAWAII.

Though the island of Hawaii has an area exceeding that of all the other islands combined, yet it was deemed inexpedient, in establishing county government, to make more than one county of it. The reasons for this will suggest themselves on examining the accompanying map and a perusal of the island's physical description herein sketched. Hawaii has an area of 2,570,000 acres, or 4,210 square miles. Its population of 46,843, by the 1900 census, is estimated to have grown to 60,000 and odd.

The longest axis of the island of Hawaii is north and south, a distance of 90 miles, and its greatest width is 74 miles. On this island are two mountains of over 13,600 feet in elevation, named Mauna Loa and Mauna Kea, which are often capped with snow, but their slopes fall so gently that when seen from a distance they give the impression of a table-land. This fact, together with its location, identifies Hawaii as the island found on the early Spanish maps, published long before the discovery by Cook, and named by the Spaniards "La Mesa." In addition to these two mountains there is a third, Mount Hualalai, the three forming almost an equilateral triangle 15 miles in each direction, on the southwestern side of which, as the map shows, are the high lands of Kona. Into this triangle in ages past the volcanoes had poured their streams of molten rock, which found an outlet through the northern and eastern sides of the triangle, in some instances the flows being miles in width and extending into the sea. The great flows of 1843, 1855, and 1859 ran mile after mile and spread out an immense volume of rocky slag, and around this central tract, because of these lava deposits, are large areas of waste land, on which neither animal life nor vegetation subsists. From an elevation of 8,000 feet upward the summit slopes of these mountains are barren. Below that level the slopes on the northwesterly exposure are covered with dense forests. There is an area between the forests and the upper barren tops used for cattle and sheep ranches, and in one instance it was necessary to erect 11 miles of stone fencing to keep the sheep from becoming lost and starving on the lava flows. This large barren region is practically uninhabited, the ancient population of the island, as well as the modern,

confining itself to the more salubrious and productive seashores. Yet across these hot, dry central wastes between the mountains the King's messengers passed swiftly with dispatches by paths now almost obliterated.

On the eastern slopes of Mauna Loa, the mountain forming the southernmost point of the triangle, is the great volcano of Kilauea, now apparently growing extinct. Its history shows a gradual diminution of activity, until to-day there is practically no molten lava to be found, only heat and steam rising from the pit left when the fire in this crater disappeared. Two years ago the latest violent manifestations occurred, but the eruption was comparatively mild and lasted but a few months. The main crater is about eight miles in circumference and gives the impression of a sunken plain, the floor of which is of black lava with here and there a cone standing out. The walls on three sides rise perpendicularly for 400 or 500 feet. Ten or twelve years ago the molten lava rose in the central pit five or six hundred feet in depth below the floor, until it formed a lake half a mile wide which overflowed upon the floor of the crater. On the summit of Mauna Loa is the sometimes active crater of Mokuaweoweo, which as recently as 1896 gave a magnificent display of the powerful volcanic forces that have heretofore existed in these islands. There was a great lava flow again in 1899, the eruptive point being a few thousand feet below the summit. Within a hundred years this mountain has sent forth from its flanks enormous lava flows, which have broken out at various elevations and quietly flowed as long as the material lasted, having in some instances reached the sea.

In the northern extremity of the island, distinct from the others, as the map will show, are the Kohala Mountains with an elevation of but 5,500 feet. Yet from their proximity to the sea and their rising a considerable height above the surrounding plains, they conform more nearly than the vast mounds already described to the ordinary conception of mountains. Between them and the sea lie the tremendous canyons and gulches of Waipio and Waimanu, with their perpendicular cliffs 3,000 feet high covered with tropical verdure, forming some of the grandest scenery of the group. From these vast gulches the coast runs in a southeasterly direction to the town of Hilo, a distance of some thirty miles. This stretch of coast forms a series of cliffs of varying height, upon whose bases the ocean furiously breaks, and above which are sloping plains richly watered and covered with sugar cane, extending back for varied distances to an approximate elevation of 1,500 feet, where the forests begin. Along this coast there is not a vestige of a harbor.

The whole eastern coast of the island, running almost north and south, is a dry and rainless section with a clear and bracing atmosphere. On the southern coast a large indentation looks across the broad plains of Waimea, used as a cattle range, to Mauna Kea. Toward the summit and on the slopes of this mountain wild cattle are found, the offspring of those brought by Vancouver at the close of the eighteenth century, which, at Vancouver's suggestion, were protected by official edict for many years. Finding there a natural habitat, the stock has maintained itself to the present day. In the same region also are to be found wild horses, the progeny of those introduced by Captain Cleveland from California in 1803, but with modern methods of ranching and the subdivision of these vast areas



into small inclosed paddocks, these wild animals will soon be a thing of the past.

Along the picturesque Hamakua coast line, already described and shown within the red lines on the map, from the great gulches to Hilo, is a continuous chain of sugar plantations, the sites of which are marked by the tall smokestacks of their mills. It forms a remarkable area, not only in the grandeur of its scenery, but because of its productiveness. Here artificial irrigation is not necessary, the rainfall being ample for the production of sugar. The many little streams and rivulets that start in the forests and run over the cliffs into the sea are used by the plantations for fluming the cane from the upper fields to the mills. Owing to the dangerous sea approach and absence of harbors, considerable ingenuity in shipping sugar, receiving supplies, and embarking and disembarking passengers by the coasting steamers is brought into play at the plantation landings. A wire-cable system of carrying is in common use. From an anchorage out in the deep sea a cable is stretched over a tower on top of the cliff and anchored to a huge block of cement set behind it. Under this cable the steamer is moored and by a traveling pulley with a cage, operated by a donkey engine, freight and passengers are aerially carried to and from the steamer.

Notwithstanding the usual plentitude of moisture in the Hamakua and Kohala districts—forming the region just described—there have been occasional seasons of most damaging droughts, sometimes accentuated in disaster by forest fires. To forever ward off such calamities a great irrigation project has this summer been, in main part, completed. This is the Kohala ditch, constructed under joint Federal and Territorial authority, as its base of supply and its course are largely upon the public domain. At a cost of about a million dollars this work taps the inexhaustible resources of water in the Kohala Mountains and feeds the irrigation ditches of the sugar plantations interested in the enterprise. It also makes capable of tillage in sugar cane a large area of land in Kohala which, from being outside of the rain belt, has been arid and worthless. Moreover the charter of the corporation obligates it to supply homesteaders perpetually with water at the minimum rate. It is along the coast of this island that the greatest opportunity for railroad development in the whole group exists, and, were it not for the engineering difficulties to be encountered in crossing the multitude of gulches, there would have been ere this a line of railways connecting each sugar plantation with the port of Hilo.

There are but two railroads on the island. The longer and newer one runs out of Hilo parallel with the coast to the sugar fields of Puna by one fork, and through Olaa plantation by another, the latter ending at an elevation of 2,300 feet, more than halfway to the volcano. The other railroad crosses the north part of the island, from the sheltered roadstead at Mahukona to the sugar fields of Kohala, a distance of 10 or 12 miles. Its main purpose is the carrying of sugar for shipment at Mahukona. A third railroad is being projected, in connection with the revival of sugar planting in Kona, which will connect the north and the south districts of that name and have an ocean outlet at a convenient point.

Hawaii has many comparatively small tracts of land not suitable for large sugar plantations, but finely adapted to the cultivation of various fruits, coffee, cocoa, vanilla, etc. Kona oranges, pineapples



and coffee were famous before the present extensive movement to establish diversified industries in the group had gained much headway. It is in Hamakua district on this island that the successful experiment in tobacco culture, under the direction of the United States experiment station, has been made and coffee of best quality is being raised there. With an increase in ocean-steamship facilities, conjoined with improved railway and highway communications inland, the island of Hawaii can not but win premiership in diversified industries such as it has heretofore maintained in sugar production.

Hilo, the county shiretown, is the second largest city in the group. It is located on a convenient and magnificent bay, which needs but a small breakwater to make a splendid harbor of it.

When it secures this improvement and protection to its commerce its importance as a port will make railway connection with all parts of the island a necessity. Hilo has water and sewer systems provided by the Territorial government, an electric light and power plant, a volunteer fire department, a public library maintained by its citizens, and a high school, besides some excellent private seminaries. For many years all the inhabited parts of the island have been connected with each other and with Hilo by an incorporated telephone system, and for some time past the island has had wireless telegraphic communication with the other islands and Honolulu. This means also instant communication with all the world through the Pacific cable office in Honolulu. (The former isolation of the islanders generally has indeed forever passed away.)

For several years Hilo has had a direct steamer service to and from San Francisco, the steamer between arrival and departure at Hilo making a call at Honolulu for additional freight. Before this is printed a steamer from Portland, Oreg., will be added to the line with Honolulu as an intermediary port.

Below is a brief statement of the value of real and personal property within the county of Hawaii, as shown by the returns of the tax assessor as of January 1, 1906:

Real property.....	\$14, 948, 462. 00
Personal property.....	12, 036, 906. 00
Total.....	26, 985, 368. 00

The revenues and expenditures of the county of Hawaii for the first year have been as follows:

#### RECEIPTS.

Estimated revenue paid by treasurer to June 30, 1906.....	\$150, 190. 10
Balance in settlement for the actual revenue.....	19, 292. 36
Total paid to county of Hawaii by Territorial auditor.....	169, 482. 46
Less interest on warrants.....	313. 38
Net payment to county.....	\$169, 169. 08
Receipts by county from other sources.....	328. 00
Total receipts by Hawaii County for general revenue.....	169, 497. 08
Road tax balance, June 30, 1905.....	7, 328. 00
Road tax paid to county to June 30, 1906.....	37, 032. 00
Receipts from other sources.....	677. 04
Total road-fund receipts for county.....	44, 947. 04
Total receipts for county of Hawaii.....	214, 444. 12

## EXPENDITURES.

From general fund.....	\$142, 069. 27	
From road fund.....	14, 604. 97	
	<hr/>	
Total for fiscal year.....		\$156, 674. 24
		<hr/>
Balance cash on hand, June 30, 1906.....		57, 769. 88
Being:		
General fund.....	27, 427. 81	
Road fund.....	30, 342. 07	
	<hr/>	57, 769. 88

The following officials were elected to office during the first year of county government:

Board of supervisors: John T. Moir, Hilo, chairman; James F. Woods, Kohala, vice-chairman; Stephen L. Desha, Hilo; Wm. M. Kalaiwaa, Kona; Oliver T. Shipman, Kau; D. K. Makuakane, Puna; Antone Fernandez, Hamakua.

Sheriff, Wm. M. Keolanui; clerk, Samuela K. Pua; auditor, Charles K. Maguire; attorney, Charles Williams; treasurer, Thomas K. Lalakea.

Deputy sheriffs: W. A. Fetter, Hilo; James Mattoon, North Hilo; Wm. J. Rickard, Hamakua; S. H. Haaheo, Puna; Chas. H. Pulaa, North Kohala; John K. Kekaula, Kau; Wm. M. S. Lindsay, South Kohala; D. K. Baker, South Kona; J. W. Keliikoa, North Kona.

## COUNTY OF MAUI.

The county of Maui consists of the islands of Maui, Lanai, Molokai, and Kahoolawe and all other islands lying within 3 nautical miles of the shores thereof, excepting that portion of the island of Molokai known as the Leper Settlement, which is segregated as the county of Kalawao, with certain powers of self-government in the election of local officers.

In the census of 1900 the population of this subgroup—then as now forming a single judicial and electoral district—was 27,920. It now probably approaches 40,000.

## ISLAND OF MAUI.

The island of Maui, the second in area in the Territory, as also in altitude, is one of a group of three islands that lie between Hawaii and Oahu. In shape it is said to resemble the head and shoulders of a woman. It is composed of two great peaks, connected by a low plain, to which water has been brought by large irrigation ditches from long distances, and this plain now furnishes some of the richest agricultural land in the group.

West Maui has every appearance of great age, the mountain having been eroded deeply into sharp ridges and deep gorges. Iao Valley, the principal gorge, has a depth of 4,000 feet, cut right out from under the summit of the mountain, narrowing down at its entrance in the form of a horseshoe, the amphitheater of which furnishes some of the grandest scenery in the islands. This valley was famous as a Hawaiian burial place. The summit of this second great peak of the island, called Puukukui, is well wooded and watered and furnishes one of the few of the larger streams or rivers of the island, which is

intercepted with falls and cascades almost to the sea. Around the base of the mountains the dry, barren plains have in some instances been brought under cultivation by irrigation.

There are no authentic records in the memory of man of any volcanic eruption on the island of Maui, although there are many signs indicating formations which appear to be of comparatively recent origin. The east mountain of this island furnishes the largest extinct crater in the world—Haleakala—with an elevation of 2 miles and a circumference of 20. Standing on the rim and looking into the crater, the bottom is one-half mile down, and it still gives the appearance of volcanic action on a grand scale. When this crater was filled with molten lava, more than a mile and a half above the sea level, its walls gave way in almost opposite directions and a vast amount of material ran down from these openings to the sea. This, however, was so long ago that the slopes are now covered with a dense growth of tropical vegetation. The south and west slopes of Haleakala have little or no forest growth upon them, and they have been used for some time as cattle ranches. But the northerly and easterly exposed slopes are heavily wooded and cut with numerous mountain streams. These are the streams which furnish the water for the plains between the two uplands of the island. Many of the valleys and wooded slopes on the exposed sides of east Maui are adapted to rubber culture, and it has been found that a large number of small trees have sprung up from one or two trees that had been planted years ago and abandoned. A large number of trees have recently been set out, and those interested claim that the rubber industry will make that portion of Maui the richest in production of any equal area in the Territory.

#### ISLAND OF LANAI.

Directly south of Molokai and about equidistant from west Maui is the island of Lanai, with an area of 86,000 acres, or 139 square miles. It is almost circular in form, its highest peak, situated nearly in the center, being almost 3,400 feet high. To the south of this is a basin of rolling pasture land of considerable area. As is so often the case, the northeastern exposure is precipitous, cut with deep gorges, one of which is a sheer cliff of 2,000 feet, and at the bottom of it is the only water source on the island. The entire island is used as a sheep ranch.

The northwesterly side is swept by the trade winds which drive through the channels between Maui and Molokai. Here, over a large area, there is a constant struggle between the forces of nature. The winter rains encourage the scattered grass seeds, then the summer sun dries up the soil, and the winds blow everything out to sea. Unless human ingenuity is thrown into the scale against the forces of nature, man's dominion will have to yield and the area on which there is not a living thing will greatly increase.

#### ISLAND OF MOLOKAI.

Molokai is a long, narrow island, lying between the islands of Oahu and Maui, stretching out east and west 40 miles, with a width of less than 10 miles. A little to the west of the middle is a low, rolling



plain, which reaches from sea to sea, beyond which there rises a plain or plateau whose greatest height is 380 feet, which forms a rolling pasture land, with a very light rainfall, and on which there is practically no water, although there are evidences of a former forest growth. The eastern end is mountainous and attains an elevation of nearly 5,000 feet, the whole northern coast of which is a series of precipices, from 1,000 to 4,000 feet high, cut into by three great valleys, which continue to the very center of the island. On the southern slopes of these valleys are cattle ranches, while most of the forest summits are now fenced and protected.

On the northern exposures, at almost the center of the island, a peninsula juts out from the abutting cliffs, furnishing an area of about 6 square miles, on which is located the leper settlement, which, with physicians and others, has a population of about 1,000 souls. The legislature has made special provision for this section by creating the small area into the fifth county, continuing its control under the board of health.

## ISLAND OF KAHoolaWE.

Kahoolawe lies to the southeast of Lanai and near to East Maui. It is a long narrow island of some 69 square miles, with an altitude of 1,400 feet. From its uninviting aspect and the necessity for depending upon rain water, this island has been inhabited only by those raising sheep, for which purpose it has been used as a ranch for many years. With the assistance of the sheep, the entire island is gradually becoming a barren waste. Its location can usually be noted from passing vessels by the cloud of dust that arises from the constantly increasing area which is denuded of vegetation.

## TOWNS.

Wailuku, the county capital, is a progressive town, having in recent years made great advances in urban appearances and the institutions of civilization. It is connected by railway with the adjacent town of Kahului and many cosy villages upon the plantations beyond. Kahului is making great strides, and, with its breakwater under construction by private enterprise, is almost certain to become the commercial metropolis of Maui. Lahaina, the "ancient capital," is a regular landing on the steamer route between Honolulu and Hilo. It is the seat of one term of the circuit court each year, the other quarterly terms being held at Wailuku. Close by Lahaina is Lahainaluna Seminary, both the oldest public school in the Territory and the leading one, other than the reformatory school for boys, in the line of industrial training.

The following summary shows the value of property within the county of Maui, as returned by the tax assessor on January 1, 1906:

Real property.....	\$13, 751, 567. 00
Personal property.....	7, 375, 191. 00
Total.....	21, 126, 758. 00



The following table shows the receipts and expenditures of the county of Maui for the first year of county government:

## RECEIPTS.

Estimated revenue paid by treasurer to June 30, 1906.....	\$107, 208. 19	
Balance in settlement for the actual revenue.....	19, 572. 78	
		<hr/>
Total paid on account of county of Maui.....	126, 780. 97	
Less amount of interest on warrants.....	168. 93	
		<hr/>
Net payments by Territory.....		\$126, 612. 04
"Road tax" balance, June 30, 1905.....	3, 693. 00	
"Road tax" paid by Territory.....	19, 289. 00	
		<hr/>
Total "Road tax".....		22, 982. 00
Receipts from other sources.....		1, 109. 22
		<hr/>
Total receipts county of Maui.....		150, 703. 26

## DISBURSEMENTS.

Total disbursements.....		97, 767. 46
		<hr/>
Cash on hand June 30, 1906.....		52, 935. 80
Being—		
General fund.....	\$45, 971. 54	
"Road tax" fund.....	6, 964. 26	
		<hr/>
		52, 935. 80

The following have been the county officials for the first year of county government:

Board of supervisors: William Henning, Lahaina, chairman; William H. Cornwell, Wailuku; Thomas H. Church, Makawao; Henry Reuter, Hana; Theo. T. Meyer, Molokai.

Sheriff, W. E. Saffery; clerk, Wm. F. Kaae; auditor, Chas. Wilcox; attorney, D. H. Case; treasurer, L. M. Baldwin.

Deputy sheriffs: Thos. Clark, Wailuku; C. R. Lindsey, Lahaina; Edgar Morton, Makawao; F. Wittrock, Hana; J. H. Mahoe, Molokai.

## COUNTY OF OAHU.

With an area in round figures of 600 square miles, or 384,000 acres, the county of Oahu consists practically of the single island bearing the same name, though its jurisdiction embraces the distant islet of Midway, now occupied as a Pacific cable relay station and a post of United States Navy marines, also all the smaller uninhabited islands of the group not specifically attached to other counties. Oahu has especial distinction from containing Honolulu, the political and commercial capital of the Territory.

Structurally the island of Oahu consists of two mountain ranges running almost parallel from southeast to northwest, bending at Kahuku Point in the extreme north and Kaena Point in the extreme west until their terminal bluffs face each other across a great plain lying between the range parallels mentioned. The Koolau Range, with a maximum elevation of 2,000 feet, is the longer one. It has a direct run of 70 miles in the course already stated, marking the extreme length of the island, the greatest width of which, at right angles to this axis, is only 30 miles. The Waianae Range, on the western side of the island, is about half the length of the Koolau

Range. It has an elevation of 4,000 feet. An extensive table-land rises gently from the sea between these ranges, with a maximum elevation of 2,000 feet. This plain is cut by many deep gulches and possesses a fertile soil, needing only water—that has lately been to a considerable extent developed by impounding—to make it yield rich returns. A narrow and fertile plain also extends along the base of the Koolau Range on the windward side, which has been under cultivation to considerable extent for many years by sugar and rice planters and taro growers.

On the southern slopes of the central plain are found the locks of the so-called Pearl River. These consist of a fan-shaped series of inlets from the sea, divided by peninsulas and islands. They have but a single entrance and are remarkable for their depth. It is here that the United States Government has set aside the necessary area for a naval station.

Facilities for obtaining a comprehensive view of the physical features of Oahu, together with enjoyment of its climatic charms, varying with elevation and prevailing wind exposures, are ample for the whole island, excepting one small eastern section, by both railway and the public highway system. A narrow-gauge railway starting from Honolulu winds along the seacoast, passing inland to clear Pearl Harbor locks, and from opposite Barbers Point in the south runs between the base of the Waianae Range and the ocean to the most easterly point of the island, thence east and northeast to the most northerly point, a total distance of 70 miles. A trip by automobile from Honolulu across the plains between the two ranges, around the northern point of the island along the eastern shore, with the high cliffs of the Koolau Range close at hand, including a climb of 1,200 feet over them through the Pali, can easily be made in a day. Such a trip affords the best idea of the varying conditions of the climate and rainfall that are to be found in these islands, besides presenting a constantly changing panorama of views that can hardly be equaled elsewhere, in which the sparkling ocean with its brilliant colors upon the reef, the verdure-covered mountains, and rapidly changing cloud effects all combine to make a scene of surpassing beauty.

The Oahu Railway and Land Company's road, whose first section was opened seventeen years ago, has been a financial success since its inception. It carries freight to and from six sugar plantations, viz, Honolulu, Oahu, Ewa, Waianae, Waialua, and Kahuku, named in the order of location from the Honolulu terminus. Waianae plantation was the first in the islands to develop electric power from water. Power is taken from the water at the head of the valley and the water is then used for irrigating the upper lands. The pumps and wells located at the mouth of the valley are operated by electricity and furnish the water for the lower fields near the sea.

The Waialua Agricultural Company has expended over \$4,500,000 in developing the low lands at that end of the island. Its sugar-cane fields extend for 15 miles along the east coast and inland up to varying elevations. It has lately constructed the largest impounding dam in the Territory, whereby the pumping of water to the higher levels of the plantation will be unnecessary. A few miles beyond Kahuku is a small sugar plantation operated by a Mormon colony which for some years has had its cane ground at Kahuku mill. The only other sugar estate in this county is that of Waimanalo, upon the

plains at the base of the high cliffs on the windward side at the eastern end of the island. Its output is carried by a small steamer to Honolulu for shipment to market.

Recently a branch of the Oahu Railway, 9 miles in length, has been extended up the bed of a gulch, over the plains, to Wahiawa for the benefit of the pineapple industry. The largest single area devoted to this fruit in the Territory is found at that place. A colony of California farmers some years ago took up lands there under the homestead law for the purposes of general horticulture. Finding the greatest advantage in pineapple raising these people made that practically their exclusive industry. Organizing as companies under the general incorporation act they established factories for preserving the fruit, one of which has been removed to spacious premises at the Honolulu Railway terminus, where a factory has also been erected for making the cans. The fruit is packed in both tin and glass, in styles varied to suit the demands of the trade. It is estimated that there are 3,000,000 pineapple plants growing upon 1,300 acres at this place. Some older pineapple plantations on this island are also doing well. Honolulu, the Territorial capital, has a population of about 30,000. Its streets are lighted with electricity from a government plant connected with the water supply. A private company has a first-class electric power and light plant with a large number of patrons. The telephone has been very generally used in Honolulu, with rural connections, ever since it came into practical working. For five years or so a chartered company has furnished an excellent electric street-railway service, superseding a fairly efficient horse traction system that had existed for twelve years. The city has several modern hotels, and many presentable business blocks and up-to-date stores.

As for the city plot, it is virtually one great park. It extends from the business section, upon the harbor, out over a plain through Waikiki to Diamond Head, and back from the sea frontage into various beautiful valleys and up to the breezy foothills. Electric rapid transit has made available many wholesome suburban tracts that are steadily building up with comfortable homes for both the wealthy and those of moderate means. And wherever homes exist they are surrounded by luxuriant vegetation of trees and shrubs, vines and flowers. The general effect is a charming combination of forest and town. For producing such conditions the great promoting cause has been the city's water supply, derived partly from artesian wells by pumping. The water system is still a Territorial institution, having been far advanced toward perfection before the formation of counties. Its latest improvements, including a large high level reservoir now under construction, are from the proceeds of Territorial bonds, for which the Territory is responsible.

Honolulu Harbor is an opening in the coral reef at the mouth of Nuuanu Valley. The fact that it was possible in the early days to make cattle wade out up to their middle on the reef where, secured by a line from the vessels, they could be towed through the opening made Honolulu more accessible to the commerce of the world than any other port of the islands. For this reason Honolulu became the capital and commercial metropolis of the group. The harbor has since been widened and deepened at a considerable expenditure of capital. At the time of annexation it had been dredged to a depth of



28 feet. Under the Federal Government a large portion of it has been dredged to a depth of 30 feet. Thus it is just barely able now to accommodate the larger vessels which the increasing commerce of the Pacific has brought into being.

The city has a most efficient fire department, also a sewerage system in good working order. Its streets are well macadamized and cleanly, and the community, like so many others, is passing through a civic awakening and beginning to take an interest and pride in cleanly and esthetic appearances.

The wealth of the county of Oahu is best illustrated by the tax assessor's returns of property within the county on January 1, 1906, as follows:

Real property.....	\$31,640,862
Personal property.....	36,792,873
Total.....	68,433,735

The revenue of the county consists of the entire road tax (which forms a special fund and is required to be expended in the taxation district where it is collected) and one-half of the 1 per cent heretofore collected on real and personal property. Briefly, the first year's experience resulted as follows:

## RECEIPTS.

Estimated revenue paid by the treasurer to June 30, 1906...	\$530,970.47
Balance in settlement for the actual revenue.....	47,720.76
Total paid to the county of Oahu by Territorial auditor.....	578,691.23
Less interest on warrants.....	1,212.52
Net general revenue paid Oahu County.....	\$577,478.71
Road tax balance in treasury July 1, 1905, and paid to county treasurer.....	3,382.00
Road tax paid to treasurer Oahu County for fiscal year ended June 30, 1906.....	58,908.00
Total "road tax".....	62,290.00
Receipts of county from other sources.....	11,802.03
Total receipts of county.....	651,570.74

## EXPENDITURES.

From general revenues.....	\$538,570.93
From road tax.....	52,868.10
Total expenditures.....	\$591,439.03
Cash on hand June 30, 1906.....	60,131.71
Being:	
General fund.....	50,709.81
Road-tax fund.....	9,421.90
	60,131.71

The first county officials of the county of Oahu are as follows:

Board of supervisors: George W. Smith, chairman, Honolulu; John Lucas, vice-chairman, Honolulu; Frank K. Archer, Ewa and Waianae; Andrew E. Cox, Waialua; Samuel C. Dwight, at large; H. T. Moore, Honolulu; J. K. Paele, Koolaupoko and Koolauloa.

Sheriff, Arthur M. Brown; clerk, D. Kalauokalani, jr.; auditor, James Bicknell; attorney, E. A. Douthitt; treasurer, Richard H. Trent.



Deputy sheriffs: J. S. Kalakiela, Honolulu; John Fernandez, Ewa; Chris J. Holt, Waiaanae; Oscar P. Cox, Waialua; L. K. Naone, Koolauloa; Frank Pahia, Koolaupoko.

#### COUNTY OF KAUAI.

The islands of Kauai and Niihau, which compose the county of Kauai, are situated about 90 miles to the northwest of Honolulu, and contain an area of 644 square miles, or 410,000 acres, and a population of 27,672 persons.

The island of Niihau is much the smaller of the two, having an area of only 97 square miles and a population of 175. It is used exclusively as a sheep ranch.

The island of Kauai is circular in shape, being 25 miles in length by 22 miles in width, and on account of its abundant rainfall and luxuriant vegetation is known as the "Garden Isle."

The center of Kauai is mountainous, culminating in the peak of Waialeale, which rises 5,250 feet above the level of the sea. From the mountains on all sides the land rolls gently down to the sea, the grassy uplands furnishing fine pasturage, while the fertile lower lands and rich valleys produce abundant crops of rice and sugar. The Kauai Mountains are covered with forests and fifteen fine rivers are quite evenly distributed around the island, which furnish unlimited water for irrigation purposes. Kauai temperature is a few degrees lower than that of the other islands in the group, and this, with its perfect climate and matchless scenery, makes Kauai the favorite island.

The sugar industry of the island is first in importance and furnishes employment to about 7,000 people, of whom not more than 500 are American citizens, these being principally naturalized Portuguese. Very few Hawaiians are employed upon the plantations. There are eight large sugar estates (corporations) on the island which produce annually about 75,000 tons of sugar. All these plantations raise their cane by irrigation and bring the water for this purpose down from the mountains by an extensive system of aqueducts and ditches, store it in enormous reservoirs, and draw the water from these as it is needed for irrigation.

The Kauai rivers are of such nature that enormous water power could be obtained from them, to be used in connection with the plantation works, and already the Kauai Electric Company has utilized the waters of the Wainiha River for this purpose and has in operation an electric plant of 3,600 horsepower, the electricity from which is used by the McBryde Sugar Company upon its plantation.

One important fact in connection with the plantations worthy of mention, on account of the effect it will have on Kauai's future, is that these various plantations at the present time have under lease 138,000 acres of government land, which constitute the most valuable part of Kauai's domain, on account of the water rights which in most instances attach to these lands. The leases on these lands are beginning to expire, and the policy of the present government, to parcel out the public domain among citizen homesteaders, will make Kauai a prosperous community of independent citizens, owning their own homes, thus establishing a vantage point from which the county can be developed along traditional American lines.

At present Kauai is the land of the homeless employee, who holds the roof over his head by sufferance of his employer, and whose only refuge in case of discharge is the steamer that bears him to Honolulu. Of the entire population of the county of Kauai, excluding Hawaiians, a few of whom have been wise enough to hold onto their inherited kuleanas, not 50 people own their own homes.

The rice industry, next in importance to the sugar industry, and which utilizes the rich river bottoms, is carried on exclusively by Chinese and Japanese. A very high grade of rice is produced, and Kauai leads the islands of the group in this industry.

Kauai has a few other small industries struggling for life, which in time, when strengthened by the opening of the government lands to homesteaders, will be of vast importance to the island, such as the sisal industry, the raising of pineapples, coffee, rubber trees, fruit culture, the production of honey, cattle raising, and dairying, etc.

The government of Kauai is partly local and partly Territorial. The schools, which are of a high order of efficiency, are under Territorial control, and about 2,000 children attend the 31 schools on the island. The entire revenue system is also under the Territory, the county dividing the taxes collected on its \$15,000,000 of property with the Territory.

In speaking of the success of county government, it is necessary to consider the influence of local pride on the result. The people had, long before county government was finally secured, grown tired of Honolulu control, and strongly desired to elect their own officials, with the power to hold them directly responsible to the community for their official conduct. The entire citizen populace take the keenest interest in the management of county affairs and the success of the county government. The Republican party was successful in electing all of the first county officials but two of the supervisors, who, because of their minority, have had no influence.

The first year of county government has run as smoothly and efficiently as it could in the oldest and most experienced community on the mainland. The board of supervisors at once began the macadamizing of all of the more traveled roads of the county, and considerable progress has been made in the work. Especial attention has been given to preserving the steel bridges heretofore built by the Territory, and many local improvements of a small nature have also been accomplished.

The county officials concerned succeeded in permanently closing up the many long-established gambling houses which had been operated theretofore, within four months from the time they took office, and the professional gamblers, who regularly fleeced the plantation laborers, have been driven from the island.

Without going into detail, results show marked improvement in the work of every department taken over by the county, with a corresponding satisfaction on the part of the public. The expenditures have been kept strictly within the county income, and a spirit of economy and carefulness has characterized all county transactions.

The public seem to be satisfied in the main with the measure of local government which they now enjoy. They concede that the handling of the liquor traffic, the school system, and the tax department is better at present where it is, in the hands of the Territory, while, on the other hand, it is desired that all mercantile licenses be

under the county, that district magistrates be appointed by the board of supervisors, and that all misdemeanor fines collected in the courts go to the county as an incentive to the police officials.

The voting population of the county, comprising a registration of 1,036 voters, is composed of approximately five-eighths Hawaiians, the remainder being principally, in order of numbers, naturalized Portuguese, Germans, Norwegians, and English, with about one-sixteenth native Americans. The county seat is Lihue. In politics Kauai is safely Republican.

According to the returns of the tax assessor on January 1, 1906, the wealth of the county of Kauai was as follows:

Real property .....	\$6, 567, 446
Personal property.....	8, 061, 708
Total.....	14, 629, 154

During the year the county received from the Territory as the county's share of the taxes \$110,325.99, and expended in all only \$76,164.90, leaving a balance on hand of \$34,161.07, as will more fully appear from the following statement:

#### RECEIPTS.

Estimated revenue paid by the treasurer to June 30, 1906....	\$77, 292. 88
Balance in settlement for the actual revenue.....	11, 473. 05
Total paid to the county of Kauai by Territorial auditor.....	88, 765. 93
Amount of interest on warrants included in above amount....	104. 94
Net cash to county treasurer, "general revenue" .....	\$88, 660. 99
Balance of "road tax" on hand July 1, 1905, and paid to county treasurer .....	462. 00
Total "road tax" paid during fiscal year ended June 30, 1906.	21, 203. 00
Total "road tax" .....	21, 665. 00
Total payments to county of Kauai.....	110, 325. 99

#### EXPENDITURES.

Expenditures from "general revenue" .....	\$69, 777. 15
Expenditures from "road tax".....	6, 387. 75
Total expenditures by county of Kauai for fiscal year ended June 30, 1906.....	76, 164. 90
Balance cash on hand June 30, 1906.....	34, 161. 09
Being:	
General cash.....	\$18, 883. 84
Road fund.....	15, 277. 25
	34, 161. 09

The first county officials elected and serving are:

Board of supervisors: H. D. Wishard, Lihue, chairman; W. D. McBryde, Koloa; R. Puuikē, Kawaihau; D. Kanealii, Hanalei; T. Brandt, Waimea.

Sheriff, W. H. Rice; clerk, J. M. Kaneakua; auditor, O. Omsted; attorney, J. D. Willard; treasurer, A. H. Rice.

Deputy sheriffs: W. O. Crowell, Waimea; Henry Blake, Koloa; S. K. Kaeo, Lihue; S. W. Maheula, Kawaihau; J. K. Lota, Hanalei.



## REPORTS AND DESCRIPTIONS OF THE VARIOUS DEPARTMENTS.

## DEPARTMENT OF PUBLIC INSTRUCTION.

[By W. H. BABBITT.]

In reviewing the educational work for the last year it is a pleasure to report considerable progress in spite of severe handicaps. The lack of suitable accommodations for children applying for admission and the insufficiency of funds appropriated for carrying on the work has operated against the greatest success and has made the administration of the schools a more trying task for both the department and the teachers than should be the case. The loyalty of all those in the employ of the department and the enthusiasm created by hope of better things have, however, more than offset the drawbacks, and the schools to-day are in a better condition than before. Increased activity on the part of the normal inspectors has met with an increased activity on the part of principals and teachers, and the greater promptness with which term outlines, daily programmes, etc., are prepared and regular reports sent to the department indicates a greater desire on their part to follow out the letter as well as the spirit of the rules and regulations.

Work along the usual lines has progressed with the same vigor as before, and extra effort has been made in special lines. The care of school buildings and the beautifying of school grounds have received additional attention. A prize offered to that grade in each school which should plant and raise the best tree for the year has stimulated the planting of hundreds of trees and shrubs on the grounds of nearly every public school in the Territory, and the results are already apparent, not only in the increased attractiveness of the schools, but also in the influence on the pupils themselves.

Manual training is being extended as much as possible, and the time is not far distant when each school properly equipped with tools should be in a position to do a large part of the repairing necessary from time to time. This will give the pupils a valuable training and save a very considerable outlay for the department.

Proceeds of sales from agricultural work and from articles made by the sewing classes have enabled many schools to add to libraries and to obtain articles not furnished by the department as well as to give some remuneration to the pupils themselves.

The need of an agricultural and industrial college is becoming more and more apparent. The fact that the vast majority of our students do not attend school beyond the required school age points to the necessity of fitting them as far as possible not alone for citizenship but for ability to properly maintain themselves in the struggle for existence.



## ATTENDANCE.

The attendance in the schools, both public and private, is constantly increasing. The following table shows the enrollment by years since 1898:

	All schools.	Public schools.		All schools.	Public schools.
June—			June—		
1898.....	14,997	10,965	1903.....	18,415	13,793
1899.....	15,490	11,436	1904.....	19,299	14,467
1900.....	15,537	11,501	1905.....	20,406	15,202
1901.....	16,390	12,354	1906.....	21,358	16,119
1902.....	17,518	12,958			

But the increase in attendance has not been attended by a corresponding increase in the appropriations for the maintenance of schools, and the heaviest burden has been borne by the children, in lack of suitable accommodations, and the teachers, who are now being paid inadequate salaries.

*Amounts expended by department of public instruction from January 1, 1898, to June 30, 1906.*

Year ended December 31—		Year ended June 30—	
1898.....	\$244,533.60	1902.....	\$391,785.29
1899.....	324,654.93	1903.....	388,623.63
1900.....	321,395.50	1904.....	409,048.84
Six months ended June 30—		1905.....	336,358.59
1901.....	187,268.25	1906.....	361,458.99

From this list it will be seen that the amount spent during the past year is some \$48,000 less than the amount spent two years previous, and it is less than the amount spent in the years 1902 and 1903, while the attendance was larger than at any previous time. The cost of instruction per capita has also been reduced, but at the expense of those who should not be called upon to pay it, namely, the children and teachers. Since 1899 this has been as follows:

*Cost of instruction per capita.*

1899.....	\$33.18	1903.....	\$28.28
1900.....	31.24	1904.....	28.27
1901.....	27.45	1905.....	22.12
1902.....	30.11	1906.....	22.42

The assertion that the teachers are called upon to pay more than their share is evidenced by the fact that in February of this year there were 44 teachers receiving less than \$30 per month, 56 less than \$40 per month, 171 less than \$50 per month, 50 less than \$60 per month, 38 less than \$70 per month, 15 less than \$80 per month, 32 less than \$90 per month; 385 out of 435 teachers were receiving less than \$70 per month; over 62 per cent were receiving less than \$50 per month, over 22 per cent less than \$40 per month, and over 10 per cent less than \$30 per month.

It is not remarkable that under conditions, as indicated above, the department is unable to command the best teachers in all its schools.

During the past year the following teachers have been employed in all schools of the Territory:

	Public.	Private.	Total.
Hawaiian.....	71	16	87
Part Hawaiian.....	104	17	121
American.....	173	155	328
British.....	39	20	59
German.....	8	7	15
Portuguese.....	19	9	28
Scandinavian.....	11	2	13
Japanese.....		9	9
Chinese.....	5	9	14
Other foreigners.....	5	17	22
Total.....	435	261	696

This shows an increase in the teaching force over the preceding year of but 9, whereas the attendance increased 952. The overcrowding in many of our schoolrooms, in some cases teachers having over 60 children, attests the truth of the statement that larger accommodations and more teachers are needed.

The number and description of the schools may be found in the description under the various counties.

The following tables show the nationalities in all the schools, ages of public school pupils by islands, ages of private school pupils, enrollment of public school pupils by grades, for the year ended June, 1906:

*Nationality of pupils.*

	Public.	Private.	Total.
Hawaiian.....	4,045	800	4,845
Part Hawaiian.....	2,382	1,040	3,422
American.....	457	502	959
British.....	142	81	223
Portuguese.....	3,239	1,233	4,472
Scandinavian.....	63	38	101
German.....	144	119	263
Japanese.....	3,578	719	4,297
Chinese.....	1,489	603	2,092
Porto Rican.....	338		338
Other foreigners.....	242	104	346
Total.....	16,119	5,239	21,358

*Ages of public-school pupils, by islands.*

Island.	Under 6 years.		6 to 8 years.		9 to 15 years.		Above 15 years.		Total.		Total.
	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	
Hawaii.....	44	39	1,083	841	1,658	1,330	64	42	2,849	2,252	5,101
Maui and Lanai.....	32	23	539	442	761	687	107	22	1,439	1,174	2,613
Molokai.....	5	5	33	27	108	57	3	6	149	95	244
Oahu.....	39	25	1,014	882	2,043	1,692	133	208	3,229	2,807	6,036
Kauai and Niihau.....	20	11	411	384	722	565	7	5	1,160	965	2,125
Total.....	140	103	3,080	2,576	5,292	4,331	314	283	8,826	7,293	16,119

*Ages of pupils in private schools.*

	Under 6 years.	6 to 15 years.	Above 15 years.	Total.
Boys.....	495	1,694	633	2,822
Girls.....	492	1,607	318	2,417
Total.....	987	3,301	951	5,239

*Enrollment by grades.*

Receiving.....	4,781	Grade VI.....	370
Grade I.....	3,494	Grade VII.....	257
Grade II.....	2,745	Grade VIII.....	113
Grade III.....	2,148	Normal School.....	143
Grade IV.....	1,255		
Grade V.....	716	Total.....	16,119

One of Hawaii's educational problems is that presented by the large number of nationalities represented in its school enrollment. The appended table of percentage shows the relative attendance of nationalities by birth, though doubtless a large proportion are entitled to American citizenship.

It is a significant fact that the decrease in the attendance in the public schools for the year ended June, 1906, shows over 58 per cent of pure Hawaiian blood and over 40 per cent of American blood, while the increase shows that over 58 per cent were of Japanese blood.

*Percentage attendance, 1906.*

	Public.	Private.	All schools.	Public schools.				
				Nation- alities.	Increase 1905-6.	Increase.	Decrease 1905-6.	De- crease.
	<i>Per ct.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>		<i>Per cent.</i>		<i>Per cent.</i>
Hawaiian.....	18.94	3.75	22.69	25.09	-----	-----	103	58.86
Part Hawaiian.....	11.15	4.87	16.02	14.78	51	4.67	-----	-----
American.....	2.14	2.35	4.49	2.84	-----	-----	71	40.57
British.....	.66	.38	1.04	.88	10	.91	-----	-----
Portuguese.....	15.17	5.77	20.94	20.09	214	19.60	-----	-----
Scandinavian.....	.29	.18	.47	.39	-----	-----	1	.57
German.....	.67	.56	1.23	.89	11	1.01	-----	-----
Japanese.....	16.75	3.37	20.12	22.20	640	58.61	-----	-----
Chinese.....	6.97	2.83	9.80	9.24	136	12.45	-----	-----
Porto Ricans.....	1.58	-----	1.58	2.10	-----	-----	-----	-----
Other foreigners.....	1.13	.49	1.62	1.50	30	2.75	-----	-----
Total.....	-----	-----	100	100	1,092	100	175	100

## SURVEY DEPARTMENT.

[By WALTER E. WALL.]

In 1871 the humble beginning of the government survey was made, the force, including the head of the survey, consisting of two men, two boys, and a few native laborers. The conditions under which this force began its work were as follows:

A great division of lands had been made and a new tenure established in 1848. The lands of the islands were apportioned approximately as follows:

	Acres.
To the government.....	1,495,000
To the crown.....	984,000
To the chiefs.....	1,619,000
To the native tenants.....	28,000
Total.....	4,126,000

Soon the government proceeded to sell much of its land at private sale and at low prices, the same being selected and surveyed at the option of the purchaser, who of course knew enough to select the "cream."

Surveyors were imperatively needed to survey the lands awarded to the native tenants, as well as the tracts sold by the government, and to meet this demand numerous surveyors came forward. Some of these were competent and conscientious, but many were happy-go-lucky and careless to the first requirements of a survey, and not infrequently their grotesque errors and impossible descriptions amounted almost to a display of genius.

It may serve to illustrate some of the old methods of surveying to cite the case of one who had been an old surveyor of public lands in the United States and who, when confronted with the dense jungles of Hawaii, was accustomed to send an assistant far ahead, out of sight and nearly out of hearing, and then sight his instrument as best he might at the assistant's "yell," borne faintly on the breeze, after which two chainmen, by any route that they found the easiest, would measure a distance that was recorded with microscopic precision.

At the inception of the government survey, in 1871, about 15,000 separate lots and tracts of land had been surveyed, mostly by loose and imperfect methods.

The crown lands, the chiefs' land, and the remaining government land were almost wholly unsurveyed or, if surveyed in any measure, generally in the crudest and most inexact manner. There were no reference points by which these surveys could be connected, and practically no maps to show the relation of the various old surveys to each other. Add to this that while the "Great division" of 1848 had radically changed the basis of ownership, it did not and could not change the old natural boundaries, and that the lands—government, crown, and private—were commingled in every conceivable size, shape, and location; that the country had a picturesque topography of rugged mountains, deep valleys, swamp lands, and arid lava flows, thick jungle, and open plain; that the elevation varied from sea level to 14,000 feet then a general though incomplete idea of the situation may be had.

To bring order out of this chaos, to locate the old and often "crazy" detached surveys, showing the same on general maps, and thereby determining the remainder of the government land, that it might be intelligently dealt with, was the primary object of the survey. Its scope, however, was continually widened in response to the needs of the public, and has included the making of all maps, exact measurements, and records needed for public purposes.

It has included tide observations; time observations for local standard and Greenwich mean time; meteorological, magnetic, topographic, and hydrographic work; street lines and grades for the cities of Honolulu and Hilo; the laying out of lands for settlement, and the cooperation with the court of land registration in the examination of surveys for registration under the "Torrens" system. In other words, this office has been called upon to perform many of those duties which elsewhere fall to the lot of separate bureaus or organizations.

As to the situation to-day, it may be said that the islands have been connected and covered by a triangulation scheme, in accordance with the principles and methods of the United States Coast and



Geodetic Survey; that coast lines have been surveyed and satisfactory maps made of all the islands, excepting only the few islets of little or no importance; that good district maps of all the islands have been prepared, showing the public and private ownership; that the records of the office, growing constantly more complete, have become of inestimable value, and are resorted to by all classes of the community as their first and most necessary reference in all land matters; that all transactions as to public lands may be made with a knowledge of true conditions, to the general benefit of the whole community.

Such, in brief, has been the result of the work of the survey office, and while no work of this nature can hope to be above criticism, it is a satisfaction to know that the warmest commendation of the work has been from visitors of high scientific attainments and from those of this Territory whose knowledge of the work makes their criticism valuable.

At the present time the most important work of this office is the laying out of lands for settlement under the existing land laws, and the locating, marking, mapping, and describing of the boundaries of the public lands and forest reservations.

While the general policy as to the disposition of public lands is directly in the province of the commissioner of public lands, the connection of the survey department with the details of the work, and its knowledge of the situation, is such that it seems proper to make here some comment on the matter, more particularly as to the application of the United States land laws and surveying methods to the public lands of Hawaii, an application that is not infrequently recommended by persons who have limited knowledge of the situation.

The area of the public land in Hawaii is about 1,700,000 acres. Of this only a limited portion will come under any form of cultivation, and a large portion of this depends on the construction of expensive roads and the success of new agricultural enterprises yet to be proved. This area is too small to warrant the liberal allotments made under the United States general land laws, and in view of the productiveness of Hawaiian lands of good quality such allotments are in general unnecessary.

Much of the "cream" and most of the accessible portions of the public lands were disposed of many years ago. There is still considerable public land of value, but a larger part is almost worthless—such as the great lava-flow regions and the many precipitous, rugged mountain tracts, making occupation impracticable.

In the rainy districts, expensive macadamized roads must be built for any proper development of the lands, and in many sections graded roads at heavy expense are indispensable to reach the elevations at which very much of the remaining public lands lie. Owing to the commingling of public and private lands such roads must in most cases cut through and across private lands, thereby greatly complicating the situation.

The expense attending the building of these roads, without which the settler is at the greatest disadvantage, and the limited area suited to settlement, require a careful limit of the area allotted in order to meet the needs of as many as possible.

The United States system of division into rectangular blocks could be applied to any useful purpose in only a few places, and unfortunately those places are for the most part the inhospitable,

barren localities unfit for settlement. Where the rectangular system can be applied, however, the survey department is only too glad to adopt it.

Many valuable pieces of public land are remnants of such size, shape, and location that it would be simply impossible to apply the United States survey system. Any consideration of Hawaiian land maps will show this. For instance, a tract of 2,000 acres has nine-tenths of its value represented by less than 100 acres at a low elevation, even this 100 acres lying in scattered remnants. It would be impossible to apply the United States rectangular system to those remnants below. As to the region above, even casual observation will show that, if divided at all, it must be in some conformity with the topography, if the absurdity would be avoided of having one lot on the top of an almost inaccessible peak, while another lot would capture the greater part or all of the land of real value. Cases of equal difficulty would be the rule rather than the exception.

Owing to the great differences in elevation the marked disparity of rainfall, the differences in nature of the lava flows, which have in the remote past covered areas, and in all manner of inequalities, it is impossible to assign uniform values to land. Within the area of a small lot may be found land varying from almost nominal value to several hundred dollars per acre.

The native Hawaiian rarely cultivates over half an acre of land; this and a small area for pasturage meets his apparent needs. Many Portuguese, now American citizens, who make good settlers, are well satisfied with from 25 to 30 acres. Where the nature of the country requires or the amount of land permits, lots up to 100 acres may be acquired.

To meet the requirements of the various classes and needs of the community, a variety of methods is needed by which the lands may be divided up and disposed of according to the nature and location of the land, the demand for it, and the quantity available to meet the demand. The present land laws were intended to meet existing conditions, and as far as possible prevent land grabbing and speculation and have well served their purpose.

The speculative tendency in taking up land should not be encouraged. Where the opening of land can go on in a reasonable way, favorable locations being selected as to productiveness, accessibility, etc., there is a good chance of the land being utilized and the results that were hoped for being achieved.

To push lands on the market in large allotments that will not, and indeed can not, at present be used, means that they would fall into the hands of already large holders to whom they would be of some use in connection with present holdings. Dummies can too often be found to take up land in every country, or at least perfunctory compliance may be made with conditions until title is obtained, and then for the best bidder who is generally the already large land holder.

A large part of the public land suitable for cultivation lies within the forest belt at an elevation of from 1,500 to 4,000 feet. While many diverse views are held as to the wisdom of conserving this forest, it is a question of importance to the Territory and an added reason why the matter of the disposition of the public lands should be cautiously dealt with.

Under the conditions as to the public lands and land laws, it is evident that the survey department has no light task in the laying out of lands for settlement. To perform the work with accuracy; to furnish to the commissioner of public lands the varied information required by him; to consider carefully the nature and value of the land, and to divide the same with reference to such nature and value, and with the further consideration of means of access to all lots laid out, is the task before this office. The endeavor is and has been to spare no pains to do this work to the best interest of the community.

During the year ended June 30, 1906, a number of tracts on the islands of Hawaii, Maui, Oahu, and Kauai, containing over 3,500 acres, were subdivided into homestead lots for disposal under the land laws.

Detail surveys were made of twelve additional tracts, containing an area of 9,890 acres, and a number of forest reserves were located and described, having a net area of 78,400 acres of public land. The nature of these tracts varies from valuable city lots and first-class agricultural lands to grazing fields of poor quality. Much of the land is of a rugged character and the isolated locations required extensive road surveys to make good connections with the nearest main public thoroughfares.

While doing the general field work, thirty-six school lots located at various points throughout the Territory were surveyed, and much miscellaneous office work has necessarily followed.

The recent passage of laws for the registration of land titles under the "Torrens" system has added in a considerable measure to the work of this office. All surveys and plans presented for registration are examined and checked and the necessary five blueprint copies to each prepared here. All possible aid is given to the officers of the court of land registration from the maps and records of this office or by any explanations or information which it is in the power of the office to give. The increasing number of petitions for registration is a gratifying indication of the growing popularity of a system that means much for the clearing up and simplification of titles in this Territory.

As to the survey needs of the Territory, which this office has not the force to meet, a geological survey which would include a study of the water resources of the country appears most important. The richest soils of the country are in general the driest ones, and while private enterprise has done and is doing much to develop water resources, and has reduced to cultivation much of this dry land, a more comprehensive study of the matter is needed. Waters are still running to waste that are needed for power and irrigation. Tunneling has developed considerable water and might develop much more with the help of better geological information. The conservation of storm waters is still in its infancy. While the survey department is not equipped for the study of this matter, it is in a position to cooperate and assist any survey, Federal or Territorial, that might be intrusted with this important work.

#### PUBLIC LANDS AND THEIR ADMINISTRATION.

[By JAMES W. PRATT.]

In order to avoid repetition, and at the same time assist any who may desire to secure lands in the Territory of Hawaii, I can not do better than to refer inquirers to the Interior Department for a copy



of the governor's report of 1904, on pages 36 to 41 of which appears a description of the divisions of the public lands in Hawaii and a digest of the land act of 1895, which sets forth the different methods by which lands may be acquired.

## RECORDS OF THE PAST YEAR.

The most exceptional incident that has occurred in connection with the land department of the Territory of Hawaii during the past year was the attempt to colonize the lands of Kapaa, on the island of Kauai, with Russian immigrants from Los Angeles who had already declared their intention of becoming American citizens. The result was a complete failure. Private and disinterested philanthropy provided the funds by which representatives of these people first came to view the land in order to make a report to their friends. Arrangements were made by which from 500 to 600 people were to take up about 5,000 acres of land, a portion of which has been under cultivation for years. Many obstacles were overcome in the final adjustment of a working agreement with those who had heretofore controlled this land, under government lease, by which they were to continue the cultivation of the fields until the immigrants could take them over and under which finally they were to grind the cane produced by these immigrants. Every facility and inducement was held out to these people, as it was considered an excellent opportunity to secure a large number of those who were eligible to become American citizens. The failure was due entirely to the immigrants themselves in that, after they had stipulated the number of people who would come and occupy the land, they secured only about one-fourth of that number, and these were unable to do the work required in maintaining the lands in their present state of cultivation.

There is no question that a colony of energetic farmers, willing to undertake the ordinary amount of personal labor, could in five years have made the land produce the value at which it was offered. Stated differently, 80 per cent of the value of this land was held out to these people as an inducement to secure a class of settlers which it was supposed would be a splendid addition to the population of these islands. All this will undoubtedly be demonstrated when the land reverts to the government and is opened to general settlement.

The year has also furnished one or two noteworthy incidents of opposition to the attitude of this department in its determination, wherever possible, to dispose of the lands to the greatest number. The so-called "Thompson Settlement Association," on the island of Hawaii, demanded that a certain tract of cane land, theretofore under cultivation, be cut up into 100-acre lots, the maximum area allowed by law, and turned over to the exclusive occupancy of the nineteen persons comprising this association. Upon a refusal to accede to their demands and the cutting up of these lots into average areas of 36 acres, this association has taken the matter of the commissioner's discretion into the courts, where the case is now pending. It should be remembered in this connection that the area of government cane land under cultivation is exceedingly limited and from 30 to 40 acres is an area sufficient to furnish an independent living, and probably a greater area than can be handled by one family.

Another unusual incident of the past year has been the demand of the Kapiolani Estate (Limited), heirs of the late King Kalakaua,



that they be furnished with a patent from the department on a certain portion of the public land lying in the district of Waialua, island of Oahu.

It appears that during the early part of 1887 an auction sale of various government remnants took place and five different pieces of land were bid in by the representative of His Majesty. No payments, however, were made for the land, and it was only after the then commissioner of public lands sent His Majesty a notice that the sales would be declared null and void unless payment was made without delay that two of the five pieces were paid for and patents issued. A little later a third piece was patented to his chamberlain, upon the payment of the purchase price. This latter was at least a questionable proceeding, as there is no indication of authority from King Kalakaua transferring his right and title in this piece of land to his chamberlain, nor is there any authorization for the change in the name of the purchaser. There then remained two pieces, on one of which his heirs now desire that a patent issue. As in the nineteen years since the sale no attempt had been made to complete the transaction the department holds that the King and his heirs have rested too long on whatever rights they might have had, and it will not issue a patent except under order of court.

Throughout the year there have been one or two occasions on which the opinion has been expressed that the laws under which the lands of this Territory are handled should be done away with and the so-called "American land laws" adopted in their place.

Whoever will take the trouble to examine into this question will ascertain that under certain of the United States land laws every tract of land of any value in these islands whose title now rests in the government would be in the hands of the corporations within six months from the time that those who settled on them secured their title. These islands would be overrun by a horde of dummies who would take up the land for no other purpose than to sell it out at a big advance. I believe the sober sentiment of the great mass of the people of these islands, who are willing and capable to conduct a farm here, are satisfied with the laws as they exist at present, which from necessity are sufficiently elastic to cover the great range of conditions that exist in this small area.

On the other hand, if this sentiment in favor of the national land system is not simply a desire to secure something for nothing, but is due to a failure to give the time necessary to comprehend the present division of lands, and if it is thought that the so-called "American checkerboard system" would be simpler, the following statement will show how impracticable and difficult the application of such a system would be.

The traditions and unwritten history of the Hawaiians indicate that the land divisions of these islands were in existence before Columbus discovered America. The principal unit of division was the ahupuaa, usually a wedge-shaped piece of land running from the sea to the mountain top, bounded by ridges or other easily ascertained landmarks and given a distinctive name, thus allowing the possessor to enjoy the products of the high altitudes, the table-lands, the forests, and the seashore. These ahupuaas vary in area from 1,000 acres to 175,000 acres. Within the boundaries of the ahupuaa there is often a further subdivision called an ili, a tract of land of a few acres

or a few hundred acres, belonging to and being a part of another ahupuaa located some distance away.

At the time of the great mahele or division of lands, in the reign of Kamehameha III, the King recognized the advantage that civilization offered in a system of land titles in contradistinction to the former feudal system, under which the sovereign of the moment controlled and might make right. Under this division, made sixty years ago, the King, who owned all the land, created a commission empowered to take evidence of occupancy throughout the islands, no matter how large or small, and the natives, upon a showing of cultivation or continuous occupation, were awarded the small tracts called kuleanas. At the same time the title to the ahupuaas (less allodial) was given to the chiefs and to the government, while a generous portion was reserved for whoever might occupy the throne. From this division one large irregular ahupuaa would go to a single chief or individual, while the title to the one next adjoining would be in another individual or perhaps the government or the crown; and so on throughout the islands. Many of these awards were necessarily made by name only—that is, the land was awarded without an accurate survey. One claimant would be awarded the greater division of land, save and except the smaller divisions walled or fenced in and under cultivation by the people. Thus scattered over all and through all at the time of the division were small irregular patches of land owned by a multitude of people, and it is impossible to estimate the number of transactions and further subdivisions that have taken place within the last half century.

Then, again, civilization found that the Hawaiian had from time immemorial divided the waters of the springs and streams and the joint owners had built irrigating ditches. Thus, whoever was awarded a kuleana was allowed with it so much of the running water as he might be able to take out of the irrigating ditches during a certain number of hours or days of the month. The Hawaiians even divided the sea adjacent to their land into certain areas and the right to fish within these areas was awarded. Some of these awards carried the right to catch certain fish only, while other varieties of fish caught in the same area belonged to the owners of other land or water.

These ancient awards and rights, though well known and defined, are not all accurately surveyed. The smaller kuleanas located within the larger divisions were often poorly surveyed. The rapid decrease in the Hawaiian population and their failure to probate estates has left many of these without claimants, and as they are scattered by the thousands throughout the whole group, the task of locating them requires care and attention in order to be certain that the Government is not conveying property to which it has no title. Thorough and careful work by surveyors who are well posted regarding the natives, their customs and ideas of division of land, is required, and the foregoing shows clearly the tremendous—yes, the impossible task—it would be to change the present system of divisions. In fact, the chances are that such a change would only end in greater confusion.

For further light on this subject reference may be made to the article by Mr. Wall, the Territorial surveyor, forming a part of this report.

It is pleasing to note that the California agriculturists who took up the lands at Wahiawa, at \$3 to \$5 an acre, in the year 1899, have

demonstrated that pineapple culture is here to stay, because it is profitable, and that through their thrift and energy their lands are now worth from \$100 to \$250 an acre.

Mr. Jared Smith, special agent in charge of the United States Agricultural Experiment Station here, has successfully demonstrated that tobacco, which works up into a first-class cigar wrapper, can be grown on the lands of Hamakua, Island of Hawaii.

Fifty or sixty homesteaders at Palolo appear to be firmly established and their success seems to be creating a demand for small holdings sufficiently large to produce garden truck, poultry, etc., on a small scale by wage-earners who would starve to death on an isolated quarter section.

A survey of 1,500 acres of cane fields, formerly under lease to the Hakalau Sugar Company (Limited), is near completion, and the number of applicants is greater than the number of lots that will be obtained in the division into areas of from 25 to 30 acres.

A great deal of detail work has been accomplished by this department—more than can perhaps be shown by the tables following.

Land revenue shows a considerable falling off from that of last year. A detailed examination will show that this is largely due to the collection during the previous years of back rents and delinquent payments.

*Receipts of the public lands department for the year ended June 30, 1906.*

LAND REVENUE.

Rents:	
General leases .....	\$106,360.63
Right of purchase leases .....	8,213.96
Olaa leases .....	333.28
Puukapu leases .....	2.46
Kaimu leases .....	50.01
Interest:	
Homesteads .....	301.17
Special agreements .....	650.34
Cash freeholds .....	51.03
Office fees .....	311.50
Patent fees .....	405.00
	<hr/>
	\$116,679.38

LAND SALES.

Purchase right of purchase leases .....	5,899.88
Purchase Olaa agreements .....	181.20
Purchase homesteads .....	593.50
Purchase special agreements .....	1,020.85
Purchase cash freeholds .....	805.31
Cash sales "Auction" .....	12,481.00
Government commutation fees .....	1,046.41
	<hr/>
Government realizations .....	22,028.15
	57.65
Total .....	<hr/>
	138,765.18



*Comparative statement of receipts, 1905 and 1906.*

	Twelve months to June 30—	
	1905.	1906.
<b>RENTS.</b>		
General leases.....	\$119,540.59	\$106,360.63
Right of purchase leases.....	7,027.80	8,213.96
Olaa leases.....	1,316.73	333.28
Puukapu leases.....	3.00	2.46
Kaimu leases.....	29.95	50.01
	127,918.07	114,960.34
<b>INTEREST.</b>		
Homesteads.....	53.10	301.17
Special agreements.....	1,683.05	650.34
Cash freeholds.....	124.22	51.03
Olaa agreements.....	301.62	.....
Office fees.....	358.90	311.50
Patent fees.....	325.00	405.00
	2,845.89	1,719.04
Government realizations.....	402.10	57.65
<b>LAND SALES.</b>		
Right of purchase leases.....	3,835.93	5,899.88
Special agreements.....	10,818.50	1,020.85
Homesteads.....	128.80	593.50
Cash freeholds.....	767.37	805.31
Olaa agreements.....	856.35	181.20
Kaimu leases.....	.....	.....
Government commutations.....	1,734.82	1,046.41
Cash sales "Auction".....	19,112.15	12,481.00
	37,253.92	22,028.15
Total.....	168,419.98	138,765.18

*Comparative statement of receipts, 1901 to 1906, inclusive.*

	Land revenue.	Land sales.
Year ended June 30—		
1901.....	\$98,918.54	\$35,931.33
1902.....	103,886.69	13,036.49
1903.....	105,078.15	17,991.23
1904.....	124,411.04	18,962.42
1905.....	131,166.05	37,253.92
1906.....	116,737.03	22,028.15
Total.....	680,197.51	145,203.54

Total for the six years, \$825,401.05.

**OPERATING EXPENSES.**

Operating expenses for the year have very slightly exceeded those of the previous year which, as the table of comparisons will show, were the smallest of any year since annexation. It is hoped that the coming legislature will make a more liberal allowance for the work of surveying our government lands and for the operating expenses of this department. Since taking up the work of commissioner of public lands, much time and energy have been given to the improvement and straightening out of the office records. These are now in good condition, and a large appropriation will mean a greater force, with more capacity for the intelligent development of these lands, the largest asset which the Territory possesses.



*Expenditures for the year ended June 30, 1906.*

	Appropriation for year ended June 30, 1906.	Drawn.	Balance.
Salary of commissioner.....	\$3,000.00	\$3,000.00	.....
Salary of secretary and subagent, fifth land district.....	1,800.00	1,800.00	.....
Salary of first clerk.....	1,200.00	1,200.00	.....
Salary of second clerk.....	900.00	900.00	.....
Pay of subagents and rangers.....	4,000.00	3,605.00	.....
Incidentals and general expenses (for two years to June 30, 1907) ..	7,200.00	4,252.81	\$2,967.19
Total.....	18,100.00	14,737.81	2,967.19

*Comparative statement of expenditures, January 1, 1900, to June 30, 1906.*

Eighteen months, January 1, 1900, to June 30, 1901.....	\$22,423.37
Twelve months, July 1, 1901, to June 30, 1902.....	15,950.70
Twelve months, July 1, 1902, to June 30, 1903.....	16,200.54
Twelve months, July 1, 1903, to June 30, 1904.....	20,014.85
Twelve months, July 1, 1904, to June 30, 1905.....	14,004.95
Twelve months, July 1, 1905, to June 30, 1906.....	14,737.81
Total.....	103,332.22

*Lands available for settlement, lease, sale, or other disposition each year from 1906 to 1915, surveyed and unsurveyed.*

Expiration of lease.	Land available.	Annual rent.	Expiration of lease.	Land available.	Annual rent.
1906.....	269,548.90	\$17,749.20	1912.....	14,852.13	\$3,190.50
1907.....	224,203.43	8,446.00	1913.....	109,578.02	8,922.00
1908.....	127,468.16	8,645.12	1914.....	15,398.25	1,770.00
1909.....	13,033.10	7,859.75	1915.....	1,626.46	710.00
1910.....	5,696.08	2,146.00	Total.....	822,739.53	62,268.57
1911.....	41,335.00	2,830.00			

In the foregoing table for the year 1906 is included the entire area not now under lease, or lands that have not been disposed of during previous years; and also that area the leases on which expire during the remaining half of this calendar year. Then follows the area and rental in the aggregate of all leases expiring during each calendar year thereafter to 1915.

## LANDS REVERTED.

It will be noted from the following table that during the present fiscal year only twenty-eight thousand and odd acres of land have come into the possession of the Government through the expiration of leases:

	Acres.
Total area reverting through expiration of leases.....	28,195.60
Forest land not disposed of.....	21,264.50
Sold.....	39.00
Leased (reserving right of homestead).....	1,482.00
Divided into homesteads.....	1,941.50
Now being divided into homesteads.....	1,800.00
Held under tenancy at will.....	1,336.00
Not disposed of.....	332.60
Total.....	28,195.60

Of the two hundred and sixty-nine thousand and odd acres given above as available this year by far the larger portion is represented by two large cattle ranches whose leases expire this fall.

*Lands surveyed and made available for settlement during the year ended June 30, 1906.*

Location.	Lots.	Area.
<i>Island of Hawaii.</i>		
Kaumana Hilo.....	73	9.00
Kaunamano, Kau.....	57	1,941.82
<i>Island of Maui.</i>		
Keanae, Koolau.....	32	31.04
Wailua, Koolau.....	94	111.92
Omaopio, Kula.....	20	1,025.16
Omaopio, Kula (1 reserve, 2 remnants).....	3	40.78
<i>Island of Oahu.</i>		
Palolo, Kona.....	14	14.98
Alewa, Kona.....	80	115.60
Kanohouluwi.....	5	48.20
<i>Island of Kauai.</i>		
Kalaheo, Kona.....	36	207.77
Total.....	414	3,546.21

Whenever a large parcel of land is put upon the market or turned over to settlers there are usually a few of the lots that revert to the Government, or in some instances there are not sufficient applicants for the number of lots that have been surveyed or laid out.

The following tables show the location, area, and appraised value of these parcels of land which are available for immediate settlement. It will be noted that their aggregate area is some 41,000 acres.

*List of untaken lots.*

FIRST LAND DISTRICT.

Map No.	Location.	Lots.	Aggregate area.	Appraised value.	Class.
			<i>Acres.</i>		
2	Kaimu section, Puna, Hawaii...	7	354.30	\$1,325.40	Agricultural, pastoral.
2	Kamaili section, Puna, Hawaii..	3	190.30	827.95	Do.
14	Kaohu section, Puna, Hawaii....	4	322.76	1,858.25	Do.
16	Opihikao section, Puna, Hawaii..	8	614.60	1,106.25	Do.
17	Kupahua section, Puna, Hawaii..	3	153.00	545.50	Do.
22	Nanawale section, Puna, Hawaii..	1	3.65	21.90	Do.
23	Olaa section, Puna, Hawaii.....	344	20,245.49	102,659.18	Do.
32	Kaimu-Makana, Puna, Hawaii....	10	284.54	316.91	Do.
33	Kaimu-Kalapana, Puna, Hawaii..	2	37.28	185.58	Do.
34	Kikala-Keokea, Puna, Hawaii....	12	801.97	800.62	Pastoral and waste.
35	Keaunohana-Kehena-Keekaa, Kamaili section, Puna, Hawaii..	10	568.06	354.69	Do.
40	Keonepoki-Iki, Puna, Hawaii....	17	164.24	384.82	Do.
	Makaolu section, Hilo, Hawaii..	58	10.45	1,000.00	House lots.
	Kaumana section Hilo, Hawaii..	73	5.34	730.00	Do.
3	Ponahawai section, Hilo, Hawaii..	1	98.20	491.10	Pastoral and agricultural.
13	Upper Kaiwika, Hilo, Hawaii....	7	269.25	2,154.00	Do.
	Honomu section, Hilo, Hawaii....	3	87.23	581.28	Do.
24	Upper Maulua, Hilo, Hawaii....	16	1,586.50	7,932.50	Do.
	Laupahoehoe, Hilo, Hawaii.....	40	950.74	9,507.40	Do.
	Total.....	619	26,747.90	132,783.33	

*List of untaken lots—Continued.*

## SECOND LAND DISTRICT.

Map No.	Location.	Lots.	Aggregate area.	Appraised value.	Class.
			<i>Acres.</i>		
12	Niuepa section, Hamakua, Hawaii.	2	88.54	\$748.06	Agricultural, pastoral.
11	Paauiio section, Hamakua, Hawaii.	5	193.59	4,115.25	Do.
27A	Kaapahu and Pohakea section, Hamakua, Hawaii.	39	853.50	6,818.00	Do.
	Pohakea section, Hamakua, Hawaii.	5	324.10	1,107.20	Do.
10	Ahualoa section, Hamakua, Hawaii.	5	365.22	742.78	Do.
18	.....do.....	1	20.80	156.00	Do.
18	Awini section, North Kohala, Hawaii.	2	159.40	637.60	Do.
26	Kaauhuhu section, North Kohala, Hawaii.	9	204.35	806.55	Do.
26A	.....do.....	7	48.37	.....	Homesteads, agricultural pastoral.
	Pauahi section, South Kohala, Hawaii.	17	587.30	1,330.50	Agricultural, pastoral.
15	Puukapu section, South Kohala, Hawaii.	3	132.73	432.03	Do.
	Total.....	101	2,977.50	16,892.97	

## THIRD LAND DISTRICT.

14	Kaulana section, North Kona, Hawaii.	4	132.17	\$278.62	Agricultural, pastoral.
6	Akahipuu section, North Kona, Hawaii.	2	4.07	122.30	House lots.
	Kalaoa-Ooma, North Kona, Hawaii.	6	737.50	239.97	Pastoral.
	Honuaula-Kealakehe, North Kona, Hawaii.	53	2,549.00	7,647.00	Do.
25	Kalamakowali section, South Kona, Hawaii.	1	33.30	333.00	Agricultural, pastoral.
	Kukuiopae section, South Kona, Hawaii.	2	33.20	84.56	Do.
26	Olelomoana-Opihihale section, South Kona, Hawaii.	3	85.70	332.70	Do.
36	Papa section, South Kona, Hawaii.	11	80.01	.....	Homesteads, agricultural pastoral.
	Kiolakaa-Keaa section, Kau, Hawaii.	5	159.90	412.95	Pastoral.
	Kaunamano section, West Kau, Hawaii.	57	1,941.50	14,926.64	Agricultural, pastoral.
17	Ninole-Wailau section, West Kau, Hawaii.	6	96.32	382.70	Pastoral.
	Total.....	150	5,852.67	24,760.44	

## FOURTH LAND DISTRICT.

[Islands of Maui and Molokai.]

13	Kamaole section, Kula, Maui....	63	3,322.45	.....	Homesteads, pastoral.
	Waiakoa section, Kula, Maui....	6	104.88	\$427.73	Agricultural, pastoral.
	Alae, 3 and 4 sections, Kula, Maui.	15	420.00	1,260.00	Do.
7	Pulehuiki-Kamehameiki, Kula, Maui.	2	24.82	74.46	Do.
	Keanae section, Koolau, Maui....	16	31.04	.....	Homesteads, agricultural, pastoral, and house lots.
	Wailua section, Koolau, Maui....	47	111.92	.....	Do.
20	Nahiku section, Koolau, Maui....	4	90.94	193.40	Pastoral.
20A	.....do.....	4	24.80	.....	Homesteads, agricultural, and house lots.
1	Kaupo section, Koolau, Maui....	2	125.94	386.82	Agricultural and pastoral.
1	.....do.....	6	81.93	.....	Homesteads, agricultural, and house lots.
9	Kahakuloa section, Koolau, Maui	9	786.75	990.00	Agricultural and pastoral.
9A	.....do.....	29	3.34	334.00	Taro lots.
23	Kamiloloa section, Molokai.....	1	20.00	45.00	Pastoral.
24	Hoolehua section, Molokai.....	5	76.14	350.00	Do.
	Total.....	209	5,227.95	4,061.41	

*List of untaken lots—Continued.*

## FIFTH LAND DISTRICT.

Map No.	Location.	Lots.	Aggregate area.	Appraised value.	Class.
	Alewa, Kona Oahu.....	81	<i>Acres.</i> 114.76	\$22,952.00	House lots.
	Hauula, Koolauloa Oahu.....	15	113.34	2,833.50	Agricultural.
	Hauula, Koolauloa Oahu.....	5	2.30	1,150.00	Beach house lots.
	Total.....	101	230.40	26,935.50	

## SIXTH LAND DISTRICT.

	Kalaheo, Kona, Kauai.....	29	168.15	\$582.38	Agricultural, pastoral.
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## SUMMARY.

District.	Lots.	Area.	Appraised value. <sup>a</sup>
		<i>Acres.</i>	
First land district.....	619	26,747.90	\$132,783.33
Second land district.....	101	2,977.50	16,893.97
Third land district.....	150	5,852.67	24,760.44
Fourth land district.....	209	5,227.95	4,061.41
Fifth land district.....	101	230.40	26,935.50
Sixth land district.....	29	168.15	582.38
	1,209	41,204.57	206,017.03

<sup>a</sup> Appraisements allow no value for homestead lots.

## LAND PATENTS ISSUED.

Herewith is a complete statement of all of the land patents issued during the present fiscal year; also of the exchanges made, with a summary of the total. The average per acre for the year was \$7.49, as against \$10.15 for the previous year.



*Land patents issued during the twelve months ended June 30, 1906.*

Num- ber.	Patentee.	Date.	Area.	Location.	Consider- ation.	Remarks.
4896	Antone Mendonca.	Aug. 3, 1905	<i>Acres.</i>	Nahiku Koolau, Maui.	\$253.07	Right of purchase lease.
4897	D. Pall.	July 1, 1905	101.23	Kanaio, Honouliuli, Maui.	196.00	Cash purchase.
4898	William Henry	July 8, 1905	22.34	Kanohouliuli, Kaneohe, Koolau-poko, Oahu.	800.00	Do.
4899	Antone Ribeiro	Aug. 3, 1905	10.18	Waipunaiei, Hilo, Hawaii.	80.65	Right of purchase lease.
4900	Maleka.	do.	7.98	Olaa, Puna, Hawaii.	126.00	Cash purchase.
4904	Hawaiian Trust Co. (Limited)	July 26, 1905	587	Lualualei, Waianae, Oahu.	4,700.00	Cash purchase.
4905	Joao de Castello.	Nov. 13, 1905	16.33	Waikamalo, Maulua, Hilo, Hawaii.	244.95	Right of purchase lease.
4906	Isabel Marques	do.	20	Kaapahu, Hamakua, Hawaii.	200.00	Homesteads.
4907	A. P. Ornelas	do.	22.25	do.	278.12	Right of purchase lease.
4908	Robert Laing	do.	23.23	Kaahuku, North Kohala, Hawaii.	160.00	Time payment.
4909	Makali.	do.	10.32	Pulehuku and Kanehamehiki.	20.64	Homesteads.
4910	Thos. McKimley	do.	21.30	Waipunaiei, Hilo, Hawaii.	116.40	Do.
4911	Uianu (w)	do.	9.7	Olaa, Puna, Hawaii.	123.60	Do.
4912	D. Nathaniel.	do.	10.3	do.	112.80	Do.
4913	Mrs. K. Ewaliko.	do.	9.4	Papa I, South Kona, Hawaii.	930.00	Do.
4914	Franz Buchholtz.	do.	930.41	Keonepoko-Iki, Puna, Hawaii.	15.44	Do.
4915	Emily Haole.	Dec. 5, 1905	7.2	do.	30.00	Do.
4916	Kaheakeola Kane (w)	do.	10	Kamahiku, Puna, Hawaii.	80.00	Do.
4917	W. O. Kamakaokalani	do.	10	do.	144.50	Do.
4918	J. A. K. Ohia.	do.	28.9	Malama, Puna, Hawaii.	69.00	Do.
4919	W. K. Kanehaku.	do.	11.5	do.	16.20	Do.
4920	John Annie.	do.	4.05	do.	29.60	Do.
4921	Mrs. Apo Kaotwi.	do.	7.4	do.	240.00	Homesteads.
4922	Herman Meyer.	Dec. 27, 1905	20.00	Waipunaiei, North Hilo, Hawaii.	781.60	Right of purchase lease.
4923	Nellie J. Rickard.	do.	78.16	Ahualoa, Hamakua, Hawaii.	152.10	Do.
4924	Joao Correa.	do.	15.21	do.	133.00	Do.
4925	Joao Laurence.	do.	13.3	do.	118.00	Do.
4926	Jose Gonsalves Andrade.	do.	11.8	do.	330.00	Cash purchase.
4927	S. I. Shaw.	Jan. 16, 1906	a 17,177	Hanalei, Koolaukoo, Oahu.	375.00	Do.
4928	Pauline E. Rodeik	do.	a 18,552	do.	455.00	Do.
4929	August Humburg	do.	a 14,576	do.	140.00	Do.
4930	James F. Morgan	do.	a 5,498	do.	323.04	Homesteads.
4931	Walter H. Bradley	do.	a 5,987	do.	374.40	Do.
4932	John Vieira.	Feb. 12, 1906	20.19	Kahuku, Hilo, Hawaii.	330.00	Right of purchase lease
4933	Manuel Vieira.	do.	19.60	Paaulo, Hamakua, Hawaii.	502.00	Time payment.
4934	Joshua Waiohina	do.	33	Olaa, Puna, Hawaii.	576.00	Do.
4935	Edwin Omsted	do.	26	do.	2,800.00	Cash purchase.
4936	Olaf Omsted.	do.	19.9	do.	1.00	Land exchange.
4937	H. A. Baldwin.	Feb. 12, 1906	70.50	Makawao, Hamakua-poko, Maui.	88.96	Right of purchase lease.
4938	Bernard Rudolf Banning.	do.	65.42	Kealahou, Kaneohe, Koolau-poko.	27.48	Do.
4939	S. W. Pika.	Mar. 5, 1906	11.12	Kamali, Puna, Hawaii.	25.25	Cash freehold.
4940	S. K. Peter.	do.	27.48	Olaa, Puna, Hawaii.	24.50	Do.
4941	Kini.	do.	10.09	do.		
4942	Koakulana.	do.	9.8	do.		

4943	Kamakaiwa Manono.....	do.	9.84	do.	24.60	Do.
4944	J. Kalaupili.....	Mar. 24, 1906	28.00	Kamali, Puna, Hawaii.....	168.00	Right of purchase lease.
4945	Antonio Joadquin.....	do.	14.65	Ahualoa, Hamakua, Hawaii.....	140.65	Homesteads.
4946	Joao de Medeiros.....	do.	15.35	do.	153.50	Do.
4947	John Kapu.....	do.	89.60	Nahiku, Koolau, Maui.....	291.20	Right of purchase lease.
4948	O. A. Steven.....	do.	13.53	Olaa, Puna, Hawaii.....	125.00	Time payment.
4949	Libert Hubert Roeynaems, bishop of Zeugma of the Roman Catholic Church in the Territory of Hawaii.	Apr. 20, 1906	4	Wailua, Koolau, Maui.....	1.00	Land exchange.
4950	John Umuiwi.....	May 2, 1906	11.38	Olaa, Puna, Hawaii.....	28.45	Cash freehold.
4951	Joseph Kaahau.....	do.	22	Waikauamalo, Maulua, Hilo, Hawaii.....	330.00	Right of purchase lease.
4952	E. C. Mellor.....	do.	30	do.	450.00	Do.
4953	Henry J. Lyman.....	do.	10.7	Konepoko-iki, Puna, Hawaii.....	30.00	Cash purchase.
4954	do.	do.	60	Kamali, Puna, Hawaii.....	700.00	Do.
4955	J. T. Baker.....	May 24, 1906	10.013	Puukapu Res, Waimea, South Kohala, Hawaii.....	740.00	Do.
4956	Albert Waterhouse and E. Kopke.....	May 21, 1906	a 4.700	Niau Kailhi, Kona, Oahu.....	54.00	Do.
4957	Maj. E. Davis.....	May 24, 1906	a 19.65	Tantalus Heights, Honotulu, Oahu.....	125.00	Do.
4958	Sol Kalua.....	do.	8.33	Olaa, Puna, Hawaii.....	21.75	Cash freehold.
4959	Manuel de Costa.....	do.	18.26	Waipumalei, Hilo, Hawaii.....	162.00	Right of purchase lease.
4960	Mrs. Grace W. Rokey.....	do.	33.08	Kaikiwi, Hilo, Hawaii.....	264.64	Do.
4961	Samuel Mahuka Spencer.....	do.	16.25	Puukapu, Waimea, South Kohala, Hawaii.....	40.82	Do.
4962	Annie K. Pulaa.....	do.	13	Kaunahu, North Kohala, Hawaii.....	85.50	Time payment.
4963	B. K. Moses.....	June 4, 1906	17.1	Kaunahu, Puna, Hawaii.....	492.20	Right of purchase lease.
4964	Frank Porsee.....	do.	49.22	Waikauamalo, Maulua, Hilo, Hawaii.....	28.00	Do.
4965	Puukohola.....	do.	11.2	Olaa, Puna, Hawaii.....	28.00	Cash freehold.
Total.....			2,840.623		21,285.61	

a Square feet.

*Land exchanges.*

District.	No.	Area.
		<i>Acres.</i>
First land district.....		(a)
Second land district.....		(a)
Third land district.....		(a)
Fourth land district.....	1	4.00
Fifth land district.....	1	65.42
Sixth land district.....		(a)
Total.....	2	69.42

<sup>a</sup> No exchange.*Summary, not including exchanges.*

	Area.	Consideration.	Average per acre.
	<i>Acres.</i>		
Right of purchase leases.....	1,680.23	\$6,439.83	\$3.83
Homesteads.....	141.41	1,565.23	11.06
Time payment.....	96.66	1,397.00	14.60
Cash freeholds.....	60.64	152.55	2.50
Cash purchase.....	772.263	11,603.00	15.00
Olaa reservation.....	21.00	126.00	6.00
Total.....	2,771.203	21,285.61	7.49

*Lands taken up under general provisions of the land act of 1895 (other than cash sales and Olaa purchase under special conditions of Part IX).*

Land district.	Rights of purchase leases.			Cash freeholds.			Special agreements.			Homesteads.	
	No.	Acres.	Value.	No.	Acres.	Value.	No.	Acres.	Value.	No.	Acres.
First, Hilo and Puna	23	859.01	\$9,143.37	7	78.50	292.64	1	13.53	125.00	.....	.....
Second, Hamakua and Kohala.....	16	1,077.43	4,139.02	1	48.65	735.00	.....	.....	.....	12	79.58
Third, Kona and Kau	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fourth, Maui, Molo-kai, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fifth, Oahu.....	14	1,812.53	22,660.75	20	34.52	4,461.00	.....	.....	.....	14	15.984
Sixth, Kauai.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	53	3,748.97	35,943.14	28	161.67	5,488.64	1	13.53	125.00	26	95.564

## SUMMARY OF ABOVE.

	No.	Acres.	Value.
Right of purchase leases.....	53	3,748.97	\$35,943.14
Cash freeholds.....	28	161.67	5,488.64
Special agreements.....	1	13.53	125.00
Homestead leases.....	26	95.564	.....
Total.....	108	4,019.734	41,556.78

## Comparative statement of lands taken up under general provisions of land act 1895.

	Right of purchase leases.		Cash freeholds.		Special agreements.		Homestead leases.		Total area.	Total value.
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.		
Twelve months to June 30—									<i>Acres.</i>	
1905.....	46	1,857.92	11	113.19	5	95.52	36	299.01	2,365.64	22,879.65
1906.....	53	3,748.97	28	161.67	1	13.53	26	95.564	4,019.734	41,556.78

## Cash sales "auction."

Location.	Area.	Purchase price.
Kanaio, Honuaula, Maui.....	22.34	\$199.00
Kanohouliwi, Kaneohe, Koolaupoko, Oahu.....	10.18	800.00
Lualualei, Waianae, Oahu.....	587.00	4,700.00
Hauula, Koolauloa, Oahu.....	17,177	330.00
Hauula, Koolauloa, Oahu.....	18,552	375.00
Hauula, Koolauloa, Oahu.....	14,576	455.00
Hauula, Koolauloa, Oahu.....	5,498	155.00
Hauula, Koolauloa, Oahu.....	5,987	140.00
Makawao, Hamakuapoko, Maui.....	70.50	2,800.00
Keonepoko-iki, Puna, Hawaii.....	10.7	30.00
Kamaili, Puna, Hawaii.....	60.0	700.00
Puukapu, South Kohala, Hawaii.....	10.013	740.00
Niau, Kalihi, Kona, Oahu.....	4,700	54.00
Tantalus Heights, Kona, Oahu.....	1,965	125.00
Total.....	772.263	11,603.00

## SUMMARY.

	Area.	Consideration.	Average per acre.
	<i>Acres.</i>		
Right of purchase leases.....	1,680.23	\$6,439.83	\$3.83
Homesteads.....	141.41	1,565.23	11.06
Land exchange.....	69.42	2.00	.....
Time payment.....	95.66	1,397.00	14.60
Cash freeholds.....	60.64	152.55	2.50
Cash purchase.....	772.263	11,603.00	15.00
Olaa reservation.....	21.00	126.00	6.00
Total.....	2,840.623	21,285.61	7.49

## Comparative statement of summary.

	Number of patents.	Right of purchase leases.	Homesteads.	Land exchange.	Time payment.
Twelve months to June—		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
1905.....	68	442.01	199.58	8.96	415.30
1906.....	97	1,680.23	141.41	69.42	95.66

	Cash freeholds.	Cash purchase.	Olaa reservation.	Total.	Total consideration.	Average per acre.
Twelve months to June—	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>		
1905.....	120.34	2,179.52	240.86	3,606.57	\$36,613.26	\$10.15
1906.....	60.64	772.263	21.00	2,840.623	21,285.61	7.49



## LEASES MADE.

The small number of leases made during the year is noteworthy in comparison with the past. Of general leases, there have been but five made, covering an area of 555.32 acres, with an aggregate annual rental of \$1,232.

*General leases issued during the year ended June 30, 1906.*

Date.	Lessee.	Location.	Class of land.	Area.	Term of lease.	Annual rent.	Lease to commence from—
Sept. 26, 1903	Onomea Sugar Company. <sup>a</sup>	Kawainui, Ililo, Hawaii.	Agricultural..	<i>Acres.</i> 162.30	<i>Yrs.</i> 5	\$480.00	July 19, 1903
Do.....	do. <sup>a</sup>	do.	Forest, etc....	321.90	21	50.00	Do.
July 18, 1905	G. C. Akins...	Pololu, North Kohala, Hawaii.	Rice and agricultural.	17.08	5	250.00	July 1, 1905
June 23, 1906	Hee Fat.....	Anaholo, Hanalei, Kauai.	Rice and kula.	45.00	5	301.00	June 23, 1906
Do.....	C. Lai Young.	Waikalua-waho, Kaneohe Koolaupoko, Oahu.	Agricultural..	9.04	5	151.00	Do.
	Total....			555.32		1,232.00	

<sup>a</sup> Held up to check survey.

## SUMMARY.

General leases:	
Number.....	5
Area.....	555.32
Annual rental.....	\$1,232.00

*Land patents issued on land commission awards during the twelve months ended June 30, 1906.*

Number.	Area.	Patentee.	Location.
8174.....	840 fathoms.....	Lolohi.....	Kaliu, Honolulu, Oahu.
8175.....	1 ruda 34 roda.....	Hilauea.....	Kaalaalalo, Honolulu, Oahu.
8176.....	1 ruda 3 roda.....	Kuluiki.....	Do.
8177.....	4,060 acres.....	C. Kanaina.....	Kapoho, Puna, Hawaii.
8178.....	4.63 acres.....	Kaaha.....	Kawananakoa, Honolulu, Oahu
8179.....	13 roda.....	N. Namauu.....	Lapakea, Lahaina, Maui.
8180.....	33 perka.....	A. Kaao.....	Pakala, Lahaina, Maui.
8181.....	1 acre 28 perches....	A. Paki.....	Do.

*Land licenses.*

Date of agreement.	Lessee.	Location.	Term of lease.	Annual rent.
Aug. 22, 1905	Kauai Electric Co. (Limited) <sup>a</sup> ....	Waioli, Hanalei, Wailua, and Kalaeo, Kauai.	<i>Years.</i> 50	<sup>b</sup> \$10.00
Apr. 14, 1906	Kaeleku Sugar Co. (Limited) <sup>c</sup> ....	Wailua, Hana, Maui.....	21	200.00

<sup>a</sup> The payment for rent to begin upon completion of poles and wires from Wainiha to Hanapepe, Kauai, which must be within four years from date.

<sup>b</sup> For each mile of pole and line erected.

<sup>c</sup> License to confine, conserve, collect, impound, and divert all the running surface water.

*Lands transferred to other departments.*

[To superintendent of public instruction.]

Date of transfer.	Name of land.	Location.	Area.
February 16, 1906.....	Waikoa.	Kalihi, Oahu.....	<i>Acres.</i> a 188, 530
April 10, 1906.....	Kaunamano.....	Hamakua, Hawaii.....	.96
April 18, 1906.....	Waikoa.....	Kula, Maui.....	4.00
April 25, 1906.....	Hueelo.....	Mokupapa, Hamakualoa, Maui.....	5.32
Do.....	Kanihahiku.....	Puna, Hawaii.....	2.50

<sup>a</sup> Square feet.*Lands received from other departments.*

[From superintendent of public instruction.]

Date received.	Name of land.	Location.	Area.
December 1, 1905.....	Hianaloli, 1.....	North Kona, Hawaii.....	<i>Acres.</i> 193.70
December 5, 1905.....	Kalama.....	Napoopoo, Hawaii.....	168.50
December 22, 1905.....	Waiawa.....	Ewa, Oahu.....	.34
April 10, 1906.....	Kaunamano.....	Hamakua, Hawaii.....	1.00
May 9, 1906.....	Waimea.....	South Kohala, Hawaii.....	1.00

[From superintendent of public works.]

April 6, 1906.....	Kapaloa.....	Pauoa, Oahu.....	2.75
April 9, 1906.....	Hanaiaakamalama.....	Nuuanu Valley, Oahu.....	10.10
Do.....	Reservoir lot.....	do.....	.10
April 13, 1906.....	Niau.....	Kalihi, Oahu.....	a 4,700
Do.....	Tantalus.....	Honolulu, Oahu.....	a 1,965
May 2, 1906.....	Makaoku.....	Hilo, Hawaii.....	10.45

<sup>a</sup> Square feet.

## INTERNATIONAL HEALTH WORK OF HAWAII.

[By L. E. PINKHAM.]

Although, geographically, the Hawaiian Islands are the most isolated spot on the globe, frequent communication radiates from them to the continents of both hemispheres. All disease that can be transmitted by vessel communication across the Tropics of the Pacific Ocean meets the most searching inspection and interception at the port of Honolulu, midway of the voyage, and at a time subsequent to the usual period of incubation of contagious disease. Thus the Federal quarantine authorities stationed at Honolulu have a peculiar responsibility, and have the anomalous duty of guarding against disease from all points of the compass and protecting in transit distant ports situated at opposite points of the compass. Their efforts are supplemented by the local health authorities.

In recognition of this responsibility the United States quarantine station at Honolulu is being developed into one of the largest and best equipped stations under the American flag. Where the safety of the ports of destination and local health requires, the persons affected and those exposed are promptly removed and cared for in quarantine quarters, and proper disinfection of the vessel is undertaken. The station, service, and food are so excellent that no hardship is experienced, unless detention be so regarded. Such is the

care taken on trans-Pacific steamships that detention is very infrequent. Thus mainland and other ports are notably protected by the fact that through travel touches at Honolulu.

The presence of certain contagious and infectious diseases, such as plague and leprosy, in the Orient or India has no restraining influence on travel. As a matter of fact white races have little concern in either, as it is a most infrequent exception for a white person to be affected; in fact, applied intelligence and correct living render them practically immune.

The Hawaiian Islands have had some experience with bubonic plague. Its first experience caused uncalled-for apprehension, expense, and destruction of property. In the subsequent six years and a half to date the authorities have become skilled in combating any endemic or imported recurrence of the disease. In this long period this disease has occasioned the death of but two white persons, one of whom, by his mode of living, radically invited contagion, and the surroundings of the other were questionable from a hygienic point of view.

While unremitting official vigilance is the price of public health in the Tropics and sub-Tropics, where frost lends no aid, this fact is so well appreciated and acted upon that neither the inhabitants, the visitor, nor traveler need consider health conditions in the Hawaiian Islands, for they are, in comparison, constantly normal.

#### LEPROSY—ITS SOCIAL AND ECONOMIC ASPECTS AND ADMINISTRATION.

The experience of the Hawaiian race has varied little from that of other aboriginal races. Lacking knowledge of the diseases of civilization, or their control or remedies, this race has suffered accordingly, and become susceptible to certain infections to an infinitely greater degree than other races dwelling among them.

Between forty and fifty years ago the Hawaiians found numbers of their race affected by a disease the most tragic, socially, that ever afflicted mankind—leprosy—which was undoubtedly brought from the Orient and was designated by the natives as the "Chinese sickness."

On January 6, 1866, was established one of the most remarkable institutions in existence—the leper settlement on the island of Molokai. The village is situated on a tongue of land, of some 6,348 acres, that juts into the sea which surrounds three sides, and on the remaining side are perpendicular cliffs, from 200 to 300 feet in height, forming a natural and practically impassable barrier to exit by land. Communication by sea is limited to one steamer call per week from which no person, the superintendent excepted, is allowed to land, and on which officials only may depart, except by special permit of the board of health. The scenery is notable, impressive, and rarely equaled.

The growth of this institution has been gradual in scope and administration. Its record has been one of ever-increasing care and kindness, as well as the carrying out of its mission of protection to the general population of the islands.

In whatever measure severity may, at times in the past, have been used in apprehending lepers, the process of law is now rarely used, for officials prefer to deal with the afflicted ones, not as outcasts

of society, but as deserving of the same consideration, care, and sympathy accorded to persons suffering from other incurable and lingering disease. From government physicians, covering nearly every district of the islands, and other sources, information is lodged with the board of health that a certain person has, or is suspected of having, leprosy. As soon as transportation can be secured the president of the board of health usually sends a written invitation, either direct or through the government physician, to the person suspected to call at his office or report at the receiving station in Honolulu, stating that all expenses will be paid, and, if found free from the disease, that the patient will be promptly returned home. If there is any doubt concerning a case, the person is not sent to the receiving station until after a preliminary bacteriological examination. The result of this policy is mutual confidence, which is rarely abused. If abused, the process of the law is put in motion.

It is now common for afflicted persons to carefully settle their affairs, avoiding contact with others during the few days necessary, and then, unattended officially, to proceed to the receiving station at Honolulu. The sensibilities are thus guarded and the state of mind and spirit is that of voluntary surrender of liberty and submission to care and treatment.

The bacilli of leprosy are found in the tissues of the body, and on the disclosures of the microscope, in the hands of the bacteriologist of the board of health, depends the detention of a leper suspect. If the bacilli are not found, the person is returned home with a certificate to that effect. If found, the person is held for examination by a board of four additional physicians. At this examination the suspect may be represented by a physician of his own selection and may demand further confirmatory bacteriological examination. The full board of examiners render their decision, in each case declared leprosy, to the board of health, which confirms the declaration and formally orders transportation to the leper settlement on the island of Molokai.

Within the settlement the Bishop Home, in charge of five Franciscan Sisters, domicils 79 women and girls; the Baldwin Home, in charge of Catholic Brothers, domicils 118 men and boys; and the Bay View Home, for the more helpless, cares for 38 persons; while 593 have homes of their own within the 488 buildings in the settlement. There are resident 58 helpers (kokuas) and 18 persons, including clergymen, persons of religious orders, officials, and physicians.

Six churches and a Young Men's Christian Association building afford religious privileges; several assembly halls, band stand, race track, baseball grounds, and shooting ranges furnish means of amusement. Two small brass bands, glee clubs, pianos, organs, and smaller instruments furnish music.

A number of the most modern conveniences are being or about to be established, consisting of a steam poi (a native substitute for bread) factory, a first-class steam laundry, an ice plant, a power wood yard, new and enlarged operating dispensary, hospital, and increased water supply.

The extensive United States leprosy investigation station is within the borders of the settlement.



Two companies at the settlement catch fish which are purchased by the superintendent for consumption by the lepers and their helpers only, alternating with the meat supply. Other little business enterprises are carried on by the lepers. Agriculture, live-stock raising, and dairying, for local use, is carried on by the board. Employment at fair wages is furnished all able and willing to work. None are forced to labor.

Everything necessary for the domiciling, sustenance, clothing, and treatment of these wards is furnished free of cost to the recipients by the Territorial government. Excepting the officiating clergymen and one brother, who for reasons of his own refuses to accept anything save subsistence, the board of health pays moderate salaries to all persons engaged in the work of the homes. Relatives are allowed, by special permit, to visit the settlement for a stay of several days by entering a new and attractive visitors' house, which is arranged for complete segregation and interview facilities, and where they may see and converse with their leper friends. As the lepers have the franchise, are voters, and take much interest in politics, political speakers, at election times, visit and address them from the segregated visitors' inclosure.

Leprosy has various physical manifestations; is usually slow in progress, and in many cases leaves the person vigorous and capable of the usual exertion incident to labor and sports. The medical treatment of specific leprosy has been more or less intermittent from the fact that facilities have been lacking for hospital detention and discipline, and from the fact that the sufferers have not been inclined to submit to restraint or persevere in medication. The work of the resident physician, in caring for general health and relieving the oppression of the disease, has been unremitting and arduous, so much so that an assistant physician is now resident.

It is hoped, with the renewed interest of the United States Government and the Territorial board of health, many will conclude to perseveringly submit to necessary hospital conditions and treatment, that the disease may be better understood and a cure sought. Hope is not denied to those sent to Molokai, for, where the evidence justifies, reexaminations are held, and, if the subjects are found free from the bacilli, liberty is restored. And here comes the strange fact that for a number of years not one single person so freed has been willing to accept liberty and leave the settlement. Yet this fact is not so very strange. Here is a village possessing public and private comforts and utilities vouchsafed to few villages of 1,000 inhabitants; that has much that is pleasing and attractive in the village itself, as well as the influence of a fine climate and superb scenery. While the living is simple, the Territorial government provides ample homes, food, clothing, attendance, and medical care free of cost.

Notwithstanding leprosy is a dread disease, it is doubtful if a more generally contented community exists, or one in which security and freedom from apprehension of future want so pervades the people. Happiness and enjoyment prevail to a surprising extent.

Leprosy rarely attacks white races. Lepers, usually early conscious of their trouble, withdraw from public notice and soon find their way to the settlement on the rather remote and sparsely populated island of Molokai; hence neither residents of the Territory nor travelers have any grounds for apprehension of a meeting or of contact with lepers.

The Territory of Hawaii is entitled to the admiration of the civilized world, for it most willingly bears the burden of this one disease at a cost which would relatively cause the mainland of the United States, if similarly afflicted, to care for 532,513 persons at an annual expenditure of \$72,278,458.

#### FOREST RESERVES.

[By RALPH S. HOSMER.]

During the year six additional forest reserves, with a gross area of 229,619 acres, have been declared as follows: In the Hilo district, Hawaii, 110,000 acres; in the Koolau district, Maui, 42,969 acres; in the Halelea district, Kauai, 37,500 acres; in the Puna district, Kauai, 9,935 acres; in the Ewa district, Oahu, 28,550 acres, and in the Kona district, Hawaii, 665 acres.

The total area of all the forest reserves in Hawaii was, on June 30, 1906, 249,472 acres, of which 69,566 acres of government land had been actually set apart.

Reserve projects in the districts of Kau, Hawaii; Hana, Maui, and Waianae, Oahu, a total gross area of 87,675 acres, were ready to be acted on early in the summer of 1906, while the field work in connection with other proposed reserves was well in hand.

#### FOREST EXTENSION.

In December, 1905, a circular was issued by the division of forestry offering advice and assistance to individuals or corporations desiring to plant trees. Upon request, a member of the staff visited the land and from an examination on the ground drew up a planting plan embodying practical directions as to what kinds of trees are best adapted for the needs of the applicant, and how the planting should be done to secure the best results. Numerous applications have been received and the greater part of the time of the forest nurseryman is now taken up with this branch of the work.

In connection with the offer to cooperate with the private owner in tree planting and other forest work, the division of forestry keeps on hand seed and seedlings of the more important trees. These are sold to the public at prices just covering the cost of collection or growing.

#### FOREST-FIRE LAW.

In accordance with the forest-fire law passed by the last legislature, forest-fire wardens have been appointed under the board for the various districts in the Territory. Cloth fire-warning notices calling attention to the provisions of the law and warning persons against the careless use of fire have been printed and generally posted on each island. By these means it is hoped that much may be done to prevent forest fires in the future.

#### EXPERIMENTS WITH RUBBER.

To determine the condition necessary for the best development of rubber trees and to ascertain in what localities in the Territory the trees grow well, lots of the seed of the Ceara rubber tree have been sent out to a carefully selected list of persons on each island, who have

agreed to plant and care for the trees and to report on their condition from time to time. These local experiment stations include a variety of elevations, exposures, and aspects. The resulting notes when compiled should be of no small value to persons desiring to grow rubber in the Territory.

The prospects for raising rubber on a commercial scale and at a profit have during the last year grown more and more bright. Three companies have been organized on the island of Maui, and each one has established a plantation on the windward side of the island. It is understood that one or more additional companies are projected. While the rubber industry in Hawaii has as yet hardly passed the experimental stage the present indications all point to its presently becoming a decided success.

#### KOA LUMBER INDUSTRY.

One of the most encouraging features in the forest outlook is the organization of a company to lumber koa on the island of Hawaii. Koa, which will be put on the mainland market under the name of "Hawaiian mahogany," is the best of the native Hawaiian timbers; it is a heavy, hard cabinet wood, beautiful in grain, and susceptible of high polish. The establishment of the Hawaiian Mahogany Company (Limited) marks the beginning of systematic lumbering in the Territory, and is to be welcomed as adding an industry of much promise.

#### FORESTRY IN GENERAL.

Among other points of forest interest during the past year, the celebration on November 3, 1905, of the first Arbor Day to be officially noted in this Territory may be mentioned. The day was generally observed, both in schools and by the public as a whole, a fact which may be taken as an index of the feeling that exists in the Territory in regard to forest matters.

#### DEPARTMENT OF PUBLIC WORKS.

[By C. S. HOLLOWAY.]

It would seem advisable at this time to call attention to the adoption, at the last session of the legislature, of a revised compilation of the territorial statutes, which materially affects the duties and scope of this office. This new act became operative on the 27th day of February, 1905.

Prior to 1895, the minister of the interior, now the superintendent of public works, had entire control of all government lands, with power to dispose of them by sale or exchange, subject to the approval of the King under the monarchical form of government, and of the executive council under the Republic of Hawaii.

At that time the law now known as the "Land act of 1895" was passed by the legislature, which provided for the appointment of a board of three commissioners, one to be the minister of the interior, to have control of what were to be known as "public lands." From these were excepted town lots, sites of public buildings, land used for public purposes, roads, streets, landings, nurseries, tracts reserved for forest growth and conservation of water supply, parks, and all



lands which may hereafter be used for public purposes, these remaining under the care and management of the minister of the interior.

By the joint resolution of Congress under which the Republic of Hawaii was annexed to the United States, and the organic act under which a form of government was provided for the Territory of Hawaii, these land laws were continued in force and effect until such time as they should be amended by act of Congress.

Among other changes provided for by the organic act was the substitution of the words "commissioner of public lands" for "minister of the interior" and "agent of public lands and commissioner of public lands" in that portion of the laws relating to "public lands." From that time until the adoption of the Revised Laws of the Territory by the legislature at its session last year all patents were signed by the governor and countersigned by the commissioner of public lands. The new compilation, however, provides that where lands under the control of the superintendent of public works are sold by him, patents are to be signed by the governor and countersigned by the superintendent of public works. This interpretation of the laws was tested recently in the supreme court of the Territory and confirmed by a unanimous decision. It is possible that some confusion may result by thus placing the power to dispose of government lands under two departments. There will probably be a duplication of land-patent numbers, although patents issued from this office are all marked "Patent No. —, Department of Public Works," to distinguish them from patents issued by the commissioner of public lands.

No important land transactions have been effected by this department during the past year. The leases on several of the esplanade or water front lots in Honolulu have expired, but there have been no applications for further leases of this land. This is no doubt due to the fact that formerly most of these lots were used for storage of coal arriving here for the plantations. Now nearly all of the power stations have substituted oil for fuel. Storage tanks have been erected by private interests some distance from the business section of the city. No doubt, upon the completion of the new government wharves, there will be a greater demand for these water front lots on account of their favorable location as sites for warehouses.

#### SITE FOR PUBLIC BUILDING, HILO.

Congress has recently set aside one of the principal business blocks in Hilo, formerly under the control of this department, as a site for a Federal building. One-half of this property is under a lease which will expire in 1913, and on the remaining portion of the land are situated the offices occupied by various territorial departments, as well as several buildings which are rented for business purposes. No definite action has been taken as to the improvement of this property, although, by a resolution of Congress, all money received from the sales of buildings located on the land is to be used by the superintendent of public works of the territory in grading and parking the lot.

Certain additions to the territorial waterworks system have made it possible to open up a tract of land for homesteads or residence purposes in Makiki Valley, Honolulu, this land being at present



reserved for a watershed. It is my intention to transfer such portion of the land as is no longer required for the protection of the water supply to the commissioner of public lands as soon as the surveys are completed, and the public will then have an opportunity of purchasing the property after it has been divided into homestead or building lots.

#### COUNTY ACT.

The act creating counties in the Territory of Hawaii and providing for the government thereof, as passed at the last session of the legislature and taking effect on July 1, 1905, materially modified the powers and scope of this department. Formerly the construction, maintenance, and repairs of all roads and bridges on the various islands were under the direct charge and control of the superintendent of public works. The laws provided that he should appoint road boards for each district, consisting of three members who served in an honorary capacity without pay, this appointing power vesting in the governor after the passage of the organic act. These boards had authority to expend the road taxes collected for each district, which were held as special deposits by the treasurer of the Territory. All road tax funds were paid out by draft on the superintendent of public works, upon the order of the chairman and one other member of the road board, and all vouchers were filed in the department of public works.

Current appropriations as made by the legislature were expended by the superintendent of public works, generally under the direct supervision of the road boards, although on large construction work contracts were usually made by the superintendent of public works, and inspectors were appointed who reported directly to this office.

The legislature provided in the county act that each county should have power to open, construct, maintain, and close up public streets, highways, roads, alleys, trails, and bridges within its boundaries, and as no territorial appropriation was passed at the last session for repairs during the present biennial period, it was unquestionably the intention to assign the duties formerly exercised by the superintendent of public works to the board of supervisors of each county in the maintenance of roads in the Territory. All of the road machinery, tools, and live stock belonging to the Territory were turned over to the supervisors of each county in which the property was located, and receipts were signed by the supervisors containing an agreement on their part to return the property at any time, upon demand being made by the Territory. The commissions of the road board members under territorial appointment have been canceled where the road taxes deposited prior to the taking effect of the county act have been expended, inasmuch as under the county form of government they have no further duties to perform.

The legislature limited the powers of the counties in the construction of new streets, highways, and bridges, by providing that the location, grade, method of, and material to be used in the construction of the same shall first be approved by the superintendent of public works.

The supervisors are considerably handicapped in the acquiring of rights of way for new roads, having no authority similar to that held by the superintendent of public works to exercise the powers of eminent domain.

At this time I beg to call attention to the imperfect records in this office of the titles held by the government for rights of way acquired by purchase, condemnation proceedings, and exchange. Especially in the outer districts, I find that many of the roads have been constructed through private property with apparently no record of the consent of the owner or deed of the right of way. Persons are continually applying to this office for a settlement on account of land taken for road purposes during former periods, but of course no redress can be obtained except through action of the legislature.

The county supervisors have attempted very little new construction work, using the available funds in the maintenance of roads formerly built by the Territory.

Numerous appropriations were made by the last legislature for the construction of new roads on the various islands from funds to be secured by the sale of Territorial bonds, but these highways are strictly in the line of county improvements, and it was not to be expected that the Territory would further burden itself by increased indebtedness in order to take up this work. It is, I understand, the custom on the mainland to construct what are known as "State highways" through several counties by the expenditure of State and Territorial funds, these roads upon completion being maintained by the counties benefited. Here, however, all of the counties are separated by water, so that a road built on one of the islands would not be of value to the Territory at large, or tend in any way to facilitate transportation between the various counties.

#### GOVERNMENT BUILDINGS.

The Territorial appropriations for the construction of government buildings, including schools and court-houses, are expended under the direction of the superintendent of public works.

The building located in the capitol grounds and designed for the storing of the government archives, work on which commenced in 1905, is completed and will be occupied immediately. This building, which is constructed of monolithic concrete foundations and brick walls with cement finish, contains one large room which is entirely fireproof, thus affording safe protection for the storing of government documents. In addition are reference and meeting rooms, also an office for the archivist.

The Territory is in great need of similar fireproof structures for the land, conveyance, and survey offices, as the buildings occupied by these departments are in no way suited for the filing of such valuable government documents and records which, in case of destruction, it would be impossible to replace.

In Hilo a new jail building has recently been built. The foundations are of concrete with brick walls plastered with cement. After a careful consideration of the various sites available for this structure it was decided to locate it about 1 mile above the center of the town, where the government quarries are situated. The prisoners are worked in the quarries and the rock is used in the construction of government roads. Unfortunately the appropriation made by the legislature was not sufficient to cover the cost of the building as originally designed, and it was therefore found necessary to reduce the size. In the future, if additional money be available, the wings

containing the cells can be extended so that when finally completed, in accordance with the original plans, it will be of sufficient size to afford ample accommodations for many years to come. This jail is used for the confinement of Territorial prisoners as well as prisoners held prior to trial under the county laws.

#### SCHOOL BUILDINGS.

The following schoolhouses and teachers' cottages have been constructed during the past year on the various islands of this group:

*Oahu*.—Normal School, Kahuku School, Waialua School.

*Hawaii*.—Schoolhouse and teacher's cottage, Keehia; schoolhouse and teacher's cottage, Puuanahulu; Papaikou School; Mountain View School; Makapala School; schoolhouse, 12 miles, Olaa; teacher's cottage, Kona-waena.

*Kauai*.—Koloa School; teacher's cottage, Hanalei; Hanamaulu School.

*Maui*.—Honokohau School; Kahukuloa School; Puunene School; teacher's cottage, Wailuku.

The large increase in the number of children attending school, as given by the report of the superintendent of public instruction, shows clearly the necessity of these new buildings.

The legislature made appropriations for a high school in the city of Hilo, and this building is now well under way and should be ready for occupancy about the first of next year.

#### WHARVES.

The construction of the new slips and wharves for Honolulu, which commenced in 1905, has been progressing satisfactorily, the excavation of the first slip having been completed. This slip has a width of 200 feet, a minimum depth of 34 feet, and a total length of 610 feet. It was deemed advisable to dredge one-half of the second slip before completing the wharves, as it would be a difficult matter to take out the hard coral formation immediately adjoining the wharf without serious damage to the concrete sea wall, piles, and wharf structure.

The dredging of the second slip will be completed in about two months' time, and tenders have already been called for covering the construction of the large wharf between the two slips which will have a width of 140 feet and a length of 610 feet.

At McGregors Landing, on the island of Maui, a new wharf was completed some time ago, and the approach from the main government road to the wharf is now being built. This landing will take the place of the one at present in use at Maalaea Bay, and will afford much better protection on account of its favorable location.

With the exception of the wharves at Honolulu and Hilo, there are no facilities for berthing steamers in the interisland trade, all passengers and freight being landed in shore boats carried on the decks of steamers. At many of the landings the steamers are obliged to anchor at a considerable distance from shore. In rough weather it is impossible to use these landings, and except under ordinary conditions the transportation of passengers and freight to and from the steamers is attended with considerable risk.



No wharfage or landing charges are levied by the government except on the wharves in Honolulu and Hilo, although in cases where the plantation companies and other private interests have provided machinery for the handling of freight, and warehouses for storage purposes, the right is given under the Territorial laws to collect reasonable fees from the public using such facilities.

The Federal Government is at the present time dredging the Honolulu Harbor and channel entrance, and upon the completion of this work present conditions will be greatly improved. Large freight and passenger steamers are rapidly replacing the old boats of moderate draft, and such steamers as the *Manchuria*, *Mongolia*, *Korea*, and *Siberia* are now handled with difficulty on account of lack of sufficient depth in portions of the harbor. When heavily loaded they are obliged to berth at the United States naval wharves, which are located near the channel entrance.

#### HONOLULU WATERWORKS.

In August, 1905, construction was started upon the most important improvement yet undertaken in connection with the work of this department, viz, that of the large Nuuanu dam and reservoir. This dam, when finished, will be 1,750 feet in length, with a storage capacity behind it of approximately 450,000,000 gallons of water. It is found from diagrams, in the preparation of which the assumptions made in making the computations were kept within conservative lines, that with this reservoir and the lower or No. 1 reservoir improved so as to contain when full 50,000,000 gallons, the yield would have furnished a continuous flow, with but two exceptionally dry periods, of at least 5,250,000 gallons per twenty-four hours throughout the last fifteen years (this being the period covered by the rain records), or about 50 per cent of the entire consumption of Honolulu. That it is extremely important that this work in the Nuuanu Valley be completed as soon as possible is unquestioned, because several times during the last year the present system of reservoirs was drawn down so low that had it not been for frequent showers during these last summer months, we could not possibly have furnished water to all consumers on the upper levels. The average consumption from the Nuuanu source during the last two years has been approximately 35 per cent of the entire consumption, or nearly 3,500,000 gallons daily. During February, March, and April of this year the average flow into the Nuuanu system was approximately 1,500,000 gallons daily. This present system has a storage capacity of only about 35,000,000 gallons. It is readily seen, therefore, that the supply from this source is entirely inadequate to meet the demands, and inasmuch as our pumps can not force water to consumers on the higher levels, we are at any time liable to be in a position where we can not supply our consumers on the high-pressure system. With the completion of this large reservoir and dam now under construction such conditions will be entirely overcome, and the pumps which are now being run a greater portion of the time to their full capacity will be relieved to a great extent.

The new electric-light station at No. 1 reservoir was completed in the first half of the present period, and in December last it was connected with the present system by laying approximately 300 feet



of 18-inch cast-iron pipe from the station to the old 15-inch effluent main from the two upper reservoirs.

An important through connection was made at the latter end of this period from the lower end of the 12-inch main on Nuuanu avenue, at the corner of Judd street, by laying approximately 3,700 feet of 12-inch cast-iron pipe through Judd street across the Nuuanu stream down Fort street extension to the 12-inch main at the corner of School street.

The steel force main leading from the Kaimuki pumping station out to and along the Kapahulu road has recently been replaced by cast iron, as the steel was commencing to show signs of rapid deterioration. From this new force main a branch line of 12-inch cast iron has been laid along the Kapahulu road to the Waialae road, connecting with an 8-inch main from what was the end of the main on Beretania street, opposite the Kamoiliili Church, along Beretania street and the Waialae road to the Kaimuki Zoo, a distance of about 7,600 feet. The water may now be forced up the Kapahulu and Waialae roads at the time it is being pumped to the Kaimuki reservoir main. By connecting the end of the pipe on Beretania street the Kaimuki and Beretania street pumps may work interchangeably into either the Beretania or Kaimuki districts.

An extensive improvement, one which will be of benefit not only in dry weather, but during the rainy seasons, has been planned for installation in the Makiki Valley, and the construction work was well under way at the close of this period. An excellent site for a reservoir was selected in a rocky basin directly below the waterfall. This basin will have a storage capacity of approximately 600,000 gallons, after completing the construction of a short dam with a spillway only 20 feet above the stream. A 12-inch and 8-inch effluent main, the greater portion of which has already been laid, is to connect this reservoir direct with the high-pressure system at the extreme upper end of Keeaumoku street. The average minimum daily flow, determined during an unusually dry spell, from this source has been found to be 350,000 gallons, which amount will help out materially the Nuuanu supply to the consumers on the higher levels. In addition to connecting this supply direct to the high-pressure system of distribution, a Y branch has been placed at the present reservoir site, and it is planned to lay from this branch a short line into the boiler house for a nozzle discharge upon a Pelton motor operating a centrifugal pump. This pump is to be placed at the bottom of the present artesian-well shaft, superseding the present three-plunger pump, which has proved a most costly machine to operate. When there is plenty of water in the valleys and the water not needed in the higher pressure system, this supply will be used to drive the motor and pump which, with the minimum flow through the nozzle, will raise from the artesian well into the present reservoir approximately 1,000,000 gallons per twenty-four hours. This quantity, together with that passing through the water wheel means an additional supply of from 1,000,000 to 2,000,000 gallons daily, which would relieve the Beretania pump very considerably and make a proportionate saving in the cost of fuel. When once installed this plant will cost practically nothing to operate and maintain, and will no doubt repay its moderate first cost within a year's time.

The installation of a complete oil-burning apparatus at the Beretania pumping station has resulted in a saving of about 10 per cent in the cost of fuel. Taking the last four months in which coal was used for fuel and the price paid per ton, the average cost for pumping per million foot-pounds was \$0.0058, while that of the last four months, using oil, was \$0.005225, thereby showing a saving of approximately 10 per cent.

During this period in particular full, complete, and detailed records of all work undertaken by this department have been kept and placed on file in this office. These records show the nature of work done, as well as the location and cost thereof. A system of card indexing the services has been started and already has been the means of saving a great deal of inconvenience. For each service there is a separate card, giving the size and location of both tap and service pipe, besides other data frequently referred to.

This year for the first time lines and grades have been established for the laying of water mains, and such measurements of mains and service pipe extensions and their appurtenances have been taken, so that they can be properly located and platted.

Short stretches of 6-inch cast-iron water pipe have been laid in different localities, extending over 2,700 feet in all. Numerous extensions of small-sized water pipe, under 4 inches in diameter, have been made, besides the installation of 17 new fire hydrants and about 200 additional services.

The above-mentioned subjects cover all of the larger and more important improvements made during this last period, the remainder of the work being along the line of repairs in connection with the general maintenance.

#### HILO WATERWORKS.

Water is supplied to the city of Hilo from a gravity system, with a distributing reservoir of about 800,000 gallons capacity, located about 1 mile from the business center. The height of this reservoir is sufficient to provide ample pressure for fire purposes without the aid of steam fire engines.

Last year the board of health called attention to the possibility of pollution of the water, owing to the condition of the water head, which was covered with a mass of vegetable growth and was not properly fenced to prevent cattle from drinking in the stream. Immediate attention was given to this matter, and a concrete conduit was built from the head source to the reservoir. By covering this the growth of algæ, which had formerly given considerable trouble, was prevented.

Several extensions of the mains have been installed, and the Hilo system is in good condition with the exception of one or two lines of pipe which have been in use for a good many years.

#### LAHAINA WATERWORKS.

At Lahaina the government has recently acquired by purchase from the Pioneer Mill Company the fee-simple title to 500,000 gallons of water every twenty-four hours from the valley of Kanaha, the deed containing the proviso that should at any time the water in this valley disappear the Territory would have the right to use any

other water controlled by this company. Prior to the purchase of this water the town of Lahaina was supplied from water under the control of the Lahainaluna School, but this water not being sufficient to supply the school needs and that of the town as well it was found necessary to acquire an additional supply. This water is delivered to Lahaina by gravity, the pressure being sufficient for fire purposes.

#### WAILUKU AND KAHULUI WATERWORKS.

The towns of Wailuku and Kahului are supplied from a mountain stream flowing in Iao Valley, with a distributing reservoir about  $1\frac{1}{2}$  miles outside of the town of Wailuku. Until recently the system has met all requirements, but quite a settlement has now sprung up at Kahului, so that the pipe supplying this portion of the system is insufficient to carry the water required. It is proposed to increase the size of this pipe and also construct an additional distributing reservoir between Kahului and Wailuku, so that there will be a sufficient pressure at all times on this line.

#### LAUPAHOEHOE WATERWORKS.

At Laupahoehoe the Territory maintains a gravity system, water being obtained from one of the mountain streams rising on government lands. A small distributing basin of concrete was constructed during the past year to replace an old wooden tank formerly used for the same purpose.

The source from which the town is supplied furnishes water largely in excess of the quantity used for domestic purposes and, as the intake basin is at a considerable elevation above the town, it would be quite feasible to develop a considerable amount of power which could be used for lighting or other purposes. Several applications have been received for the privilege of using this surplus water, but no definite action has as yet been taken.

#### WAIMEA WATERWORKS, KAUAI.

Several years ago the Territory purchased the water system at Waimea, and since that time has supplied the town. The water is taken from a ditch belonging to the Waimea Sugar Company, and during periods of excessive rainfall it becomes very dirty, as no provisions have been made for settlement. On account of the low pressure and small main from this ditch it is impossible to furnish sufficient water for the use of the town, and plans are now being prepared which will provide for new mains of larger diameter and a settling basin immediately below the ditch which will act as a distributing reservoir as well as a filtration plant.

#### KOLOA WATERWORKS.

The Territory also supplies water to the town of Koloa from a gravity system, but no extensions or additions have been made during the past year.

#### SEWERAGE SYSTEM, HONOLULU.

During the year ended June 30, 1906, approximately 4,376 linear feet of 8-inch and 6-inch sanitary sewer mains and 608 linear feet of 6-inch house sewers have been laid. Of this total length, 2,633 feet



were put in by contract and 2,351 feet by day labor. Some 2,700 linear feet of sewer mains are now under construction. With the proposed extensions in section 2 and the Kalihi district, the surveys and plans for which are all practically completed, we will add to the sanitary system, beyond what it was at the beginning of this last period, over 1,600 feet of 8-inch and 6-inch, besides 7,080 feet of 10-inch, 16-inch, and 24-inch main sewer and 3,200 feet of 6-inch side sewers.

With the completion of the above extensions the most insanitary sections remaining in Honolulu will have been relieved. The work completed and proposed in section 2 will do away with some 275 cesspools and vaults at present made use of by 1,400 persons living in 265 buildings. The building of the proposed Kalihi trunk line sewer will relieve the insanitary conditions of about 90 buildings, including the Kalihi Receiving Station, Kamehameha schools, and a number of large stores and dwellings. The occupants of these buildings number approximately 550. Some 70 cesspools and vaults will be done away with when this improvement is completed. It is claimed by the board of health that, due to the existence of these cesspools and vaults, they found the direct cause of numerous cases of typhoid and other contagious diseases.

The present engines and pumps at the sewerage pumping station have become so badly worn and in such generally poor repair that at the end of this last period it became absolutely necessary to arrange for a new pump. Specifications were therefore prepared for furnishing a new 15-inch centrifugal pump directly connected to a high-pressure steam engine. This pump will be of ample capacity to discharge nearly double the present flow. Tenders were received and a contract awarded which calls for complete delivery not later than October 10 next. The logs at the pumping station show that approximately 965 tons of coal were burned during the last year and 2,050,560,000 gallons of sewerage were pumped. This means an average of 5,500,000 gallons daily, which is an increase of over 20 per cent over and above that of the year before. During times of extreme high tide and increased water pressure the quantity of sewerage which it is necessary to pump is very materially increased. The records show that, due to leakage and increased flow from flush tanks and defective house fixtures, the pumps frequently have to take care of as much as 3,000,000 gallons per twenty-four hours over and above the average flow under normal conditions.

In the maintenance of this sanitary system of sewers we now have the upkeep of over 52 miles of piping and approximately 1,800 house connections.

No construction work whatever other than the regular work of maintaining the storm sewerage system has been done under the supervision of the Territory during this present period. Early in the year 1906 the upkeep and maintenance of this system was turned over to the county of Oahu.

#### SEWERAGE SYSTEM, HILO.

The contract for the construction of a system of sewers at Hilo has recently been completed and connections are now being made. It is the opinion of the board of health that the sanitary condition of Hilo will be greatly improved by the installation of this system, and in



time it should bring in a considerable revenue to the Territory. At present there is no law providing for the collection of sewer rates for the city of Hilo, but undoubtedly the next legislature will pass a law similar to the one applying to the city of Honolulu, which provides for the collection of sewer rates, charges being fixed so that sufficient money for the maintenance of the system, as well as a fair rate of interest on the money invested, will be received by the Territory.

#### FRANCHISES.

The Koolau Railway Company, recently incorporated under the laws of the Territory of Hawaii, has made application for the right to construct a railway in the district of Koolau, island of Oahu. The Territorial statute, known as the "railway act," gives the power to the superintendent of public works to enter into a contract with railway corporations whereby the right of eminent domain is given for the acquiring of private rights of way, and on government property the necessary land for the roadbed is given without charge, with the understanding that it will revert to the government if its use for railway purposes is abandoned. A contract of this nature was made with the Koolau Railway Company, and the construction of their road has been under way for some time. It commences at the terminal of the Oahu Railway at Kahuku and runs along the windward side of this island for a distance of about 20 miles. Further extensions may be made in the future, so that there is a possibility of a railway entering the city of Honolulu from this side of the island.

#### FINANCES.

[By A. J. CAMPBELL.]

In the treasurer's report of last year there were cited several changes made in the laws by the 1905 legislature, then just adjourned, the principal among which was the making of all property and income taxes payable in two installments, one-half in May and one-half in November, instead of all in November. As a result of this change there has been collected in this fiscal period approximately \$665,000 taxes, which otherwise would have been collected after June 30, 1906, and which consequently makes the receipts unusually large this year. Even after this amount (\$665,000) is deducted from the total receipts, \$3,320,998.90, there remains \$2,655,998.90, which is \$301,185.88 larger than the previous year's receipts, and is mostly due to increased collections in the different tax offices of the Territory. As a consequence, while the previous year closed with outstanding registered warrants amounting to \$636,039.20 and \$59,408.49 cash on hand, this year closed with \$72,227.96 outstanding warrants and \$335,331.37 cash on hand. During both years the Territory lived within its income, but was forced to register warrants, awaiting the time of general collection of taxes in November to pay them, and even during this year \$16,005.07 was expended in interest on previously registered warrants, prior to the receipt of sufficient cash to pay them. However, since November 1905, all warrants have been promptly paid upon presentation at the treasury, and a return to the necessity of registering warrants seems very improbable.

*Revenue for the year ended June 30, 1906.*

## CURRENT RECEIPTS.

Licenses.....	\$136,944.54
Revenue stamps.....	30,199.50
Corporations and copartnerships.....	7,014.20
Inheritance tax.....	5,879.69
Insurance tax and filing fees.....	10,788.61
Fifth-class liquor seals.....	6,788.20
Accrued interest on bonds.....	2,401.38
Real property tax.....	961,433.76
Personal property tax.....	928,841.53
Carriages, carts, and dray tax.....	42,267.00
Road tax.....	97,582.00
School tax.....	97,582.00
Poll tax.....	48,791.00
Dog tax and dog tags.....	5,579.60
Bicycle tags.....	143.10
Penalties and costs tax account.....	12,940.02
Income tax.....	392,130.22
Bureau of conveyances.....	13,099.25
Land registration court.....	1,439.44
Rents, public works.....	39,578.80
Sewerage.....	17,501.99
Market.....	228.90
Weights and measures.....	115.75
Land sales, public works.....	12,343.70
Waterworks.....	131,921.68
Wharfage, Honolulu.....	31,597.82
Pilotage, Honolulu.....	26,299.35
Wharfage and pilotage, other islands.....	4,517.62
Kerosene storage.....	4,276.46
Powder storage.....	1,349.50
Bureau of health.....	30,874.24
Judiciary department.....	53,230.63
Agriculture and forestry.....	298.85
Survey.....	575.15
Land sales, public lands.....	22,628.15
Land revenue, public lands.....	116,679.38
Department of public instruction.....	6,371.30
Secretary of the Territory.....	1,825.50
Auditing department.....	276.27
Miscellaneous realizations.....	16,662.82
Total.....	3,320,998.90
Cash balance July 1, 1905.....	59,408.49
Total.....	3,380,407.39

## DISBURSEMENTS.

Outstanding warrants July 1, 1905, legislative and those drawn by the auditor.....	\$636,039.28
Departmental expenses July 1, 1905, to June 30, 1906, being the amount of warrants drawn by the auditing department for current expenses.....	1,261,989.18
Expenses legislature, 1905, warrants drawn.....	7,898.97
Payments to county of—	
Oahu.....	530,970.47
Hawaii.....	150,190.10
Maui.....	107,208.19
Kauai.....	77,292.88
Interest on registered treasury warrants:	
County.....	1,799.77
General.....	14,205.30
Interest on bond debt.....	167,832.69

Transferred to road tax, special deposit.....	\$139,849.00	
Transferred to land sales, special deposit.....	22,028.15	
		<hr/> \$3,117,303.98
Outstanding warrants July 1, 1906.....		263,103.41
		<hr/> 72,227.96
Cash balance July 1, 1906.....		<hr/> 335,331.37

## RÉSUMÉ.

Outstanding warrants July 1, 1905.....	\$636,039.28
Less cash on hand July 1, 1905.....	59,408.49
	<hr/>
Net floating debt July 1, 1905.....	576,630.79
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Cash on hand July 1, 1906.....	325,331.37
Less outstanding warrants.....	72,227.96
	<hr/>
Net cash, without any floating debt.....	263,103.41

During the fiscal period ended June 30, 1905, the current receipts of the Territory exceeded the disbursements by \$86,849.91, which was in marked contrast to the previous year, when the disbursements exceeded receipts by \$495,948.91. Again I am pleased to note that, after making the proper allowance for purposes of comparison, the current receipts of the period just ended exceed the obligations incurred by approximately \$175,000.

## BONDED DEBT.

The bonded debt of the Territory on June 30, 1905, was \$3,137,000. During the year this was further increased by the sale of 600 4 per cent \$1,000 refunding bonds and 750 3½ per cent \$1,000 public improvement bonds, series 1905-6, and decreased by the payment of 5 per cent bonds to the amount of \$626,000, leaving a total bonded indebtedness June 30, 1906, of \$3,861,000. A detailed statement of all the bonds outstanding on July 1, 1906, is as follows:

Loan act June 13, 1896. Issued by authority of an act of the legislature of the Republic of Hawaii, approved June 13, 1896; interest at 5 per cent per annum, payable semiannually; bonds redeemable in five years and payable in twenty years from July 1, 1896.....	\$196,000
Fire-claim bonds. Issued by an act of Congress approved January 26, 1905; interest at 4 per cent per annum, payable semiannually; bonds redeemable in five years and payable in fifteen years from May 1, 1903. ....	<sup>a</sup> 315,000
Public improvement 4½ per cent bonds, series 1903-4. Issued by authority of an act of the legislature of the Territory of Hawaii, approved April 25, 1903, and approved by the President of the United States; interest payable semiannually; bonds redeemable in five years and payable in fifteen years from October 1, 1903.....	<sup>b</sup> 1,000,000
Public improvement 4½ per cent bonds, series 1904-5. Issued by authority of an act of the legislature of the Territory of Hawaii, approved April 25, 1903, and an act approved July 11, 1903, and approved by the President of the United States; interest payable semiannually; bonds redeemable in five years and payable in fifteen years from January 2, 1905.....	<sup>b</sup> 1,000,000
Refunding bond of 1905, bearing 4 per cent interest. Issued by authority of an act of the legislature of the Territory of Hawaii, approved April 25, 1903, and approved by the President of the United States; interest payable semiannually; bonds redeemable in five years and payable in fifteen years from October 4, 1905.....	600,000

<sup>a</sup> Total authorized issue, \$326,000; total required and issued, \$315,000.

<sup>b</sup> Total authorized issue (to be approved by the President of the United States), \$5,000,000.

Public improvement  $3\frac{1}{2}$  per cent bonds, series 1905-6. Issued by authority of an act of the legislature of the Territory of Hawaii, approved April 25, 1903, and an act approved July 11, 1903, and approved by the President of the United States; interest payable semiannually; bonds redeemable in five years and payable in fifteen years from January 2, 1906  $a$  \$750, 000

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3, 861, 000

The 4 per cent refunding bonds were sold in Honolulu at  $101\frac{3}{8}$ , or a 3.70 basis, and the  $3\frac{1}{2}$  per cent public improvement bonds were sold in New York at  $98\frac{3}{8}$ , or a 3.66 basis. This latter sale was made at a time when money was exceedingly high, otherwise a better figure could have been obtained, and shows that the Territory's credit in the bond markets of the mainland is good.

Money derived from the sale of bonds is used only for permanent improvements, and not for current expenses. The following table shows the loan fund transactions during this period:

Loan cash on hand July 1, 1905..... \$653, 491. 18

## RECEIPTS.

Sale of refunding 4 per cent bonds.....	\$608, 250. 00	
Sale of public improvement $3\frac{1}{2}$ per cent bonds, 1905-6 series.....	735, 937. 50	
		<hr/> 1, 344, 187. 50
Total.....		1, 997, 678. 68

## DISBURSEMENTS.

Republic of Hawaii 5 per cent bonds, loan act June 13, 1896, refunded.....	\$608, 250. 00	
Loan warrants paid.....	583, 029. 12	
		<hr/> 1, 191, 279. 12
Loan cash balance June 30, 1906.....		806, 399. 56

## BUREAU OF TAXES.

The assessable value of real and personal property in the Territory on January 1, 1904, was \$123,898,504. On January 1, 1905, it was \$133,924,100, and on January 1, 1906, it was \$131,175,015, divided as follows:

Taxation division.	Real property.	Personal property.	Total.
1. County of Oahu.....	\$31, 640, 862	\$36, 792, 873	\$68, 433, 735
2. County of Maui.....	13, 751, 567	7, 375, 191	21, 126, 758
3. County of Hawaii.....	14, 948, 462	12, 036, 906	26, 985, 368
4. County of Kauai.....	6, 567, 446	8, 061, 708	14, 629, 154
Total.....	66, 908, 337	64, 266, 678	131, 175, 015

The assessable value of this year is less than last year by nearly \$3,000,000, but is still far in excess of the year 1904. Besides the 1 per cent tax on the assessed value, the income, personal, and specific taxes increased the revenue collected through this department.

The taxes collected during the year ended June 30, 1906, amounted to \$2,587,290.23, which was \$961,214.73 more than the collections of the twelve months previous; but, as already stated, \$665,000 of this amount was due to the change made in the time and manner of collecting the same. The total cost of assessing and collecting these

$a$  Total authorized issue (to be approved by the President of the United States) \$5,000,000.



taxes, including costs of all stationery and materials, was \$73,350.92, or 2.83 per cent of the amount collected. The following table shows the taxes collected for each fiscal year since annexation:

Year.	General tax.	Income tax.	Total.
1900-1901.....	\$1,215,325.91	.....	\$1,215,325.91
1901-2.....	1,370,740.29	\$287,366.80	1,658,107.09
1902-3.....	1,445,926.35	205,096.77	1,651,023.12
1903-4.....	1,608,657.33	172,542.16	1,681,199.49
1904-5.....	1,469,017.99	157,057.98	1,626,075.97
1905-6.....	a 2,195,160.01	a 392,130.22	a 2,587,290.23

a For purposes of comparison a \$1,922,290.23 should be used instead of \$2,587,290.23, \$322,764 instead of \$392,130.22, and \$1,599,526. instead of \$2,195,160.01.

## BUREAU OF CONVEYANCES.

During the year the work of this office has progressed favorably, and 3,526 documents were recorded. The collections for the year ended June 30, 1906, were \$13,099.25, as against \$13,926 the previous year, and the expenses of the office were 76½ per cent of the collections, or \$10,576.25, as against the previous year's 57¾ per cent, or \$7,850.97. The aim of the office is to give prompt and reliable service, and the receipts are made up mainly of the recording fees.

## CORPORATIONS.

During the year 36 new companies were created, either by charter or by articles of association, as follows: Mercantile, 15; agricultural, 9; railways, 3; savings and loan, 2; trust company, 1; eleemosynary, religious, etc., 6; making domestic corporations in force on June 30, 1906, as follows: Mercantile, 360; agricultural, 106; railways, 10; savings and loan, 12; street car, 1; eleemosynary, religious, etc., 121; banks, 3; trust companies, 3; insurance, 1.

In addition to the above 125 foreign corporations are authorized to do business in the Territory, as follows: Mercantile, 16; agricultural, 5; bank, 1; savings and loan, 4; railway, 1; street car, 1; insurance, 97. There are also 4 national banks doing business in the Territory.

*Franchises and agreements and the capitalized value of the companies operating under them.*

## FRANCHISES.

Hawaiian Tramways Company (foreign corporation).....	\$325,000
Franchise granted for thirty years from August 29, 1884, Chapter XXXIV, Session Laws of 1884, reenacted by Chapter XVIII, Session Laws of 1886. Franchise granted for thirty years from September 19, 1886.	
Oahu Railway and Land Company.....	4,000,000
Franchise granted for twenty years from September 11, 1888, Chapter LXII, Session Laws of 1888, reenacted by Chapter XXXI, Session Laws of 1890. Franchise for fifty years from September 15, 1890.	
Hawaiian Electric Light Company (Limited).....	500,000
Franchise granted for ten years from May 23, 1893. New franchise granted by the legislature of the Territory of Hawaii, Session Laws of 1903, approved April 28, 1903, for thirty-five years, and approved by United States Congress, April 21, 1904.	
Honolulu Rapid Transit and Land Company.....	1,150,000
Franchise granted for thirty years by legislature of the Republic of Hawaii, Session Laws of 1898, approved July 7, 1898. Approved by United States Congress, June 25, 1900.	

Honolulu Gas Company (Limited).....	\$200, 000
Franchise granted for thirty-five years by the legislature of the Territory of Hawaii, Session Laws of 1903, approved April 15, 1903, and approved by United States Congress, April 21, 1904.	
Kauai Railway Company.....	10, 000
Franchise granted for thirty years by the legislature of the Territory of Hawaii, Session Laws of 1903, approved April 25, 1903. Not yet approved by Congress.	
Standard Telephone Company (Limited).....	150, 000
Franchise granted for twenty-five years from April 26, 1906, act 66, Session Laws of 1905. Approved by the Congress of the United States June 20, 1906.	

## AGREEMENTS.

Mutual Telephone Company.....	\$150, 000
Hilo Electric Company (Limited).....	100, 000
Hilo Railroad Company.....	1, 000, 000
Koolau Railway Company (Limited).....	50, 000
West Hawaii Railway Company.....	100, 000
Kahului Railroad Company.....	75, 000
Kohala Ditch Company (Limited).....	500, 000

While several of the companies operating under agreements or franchises are required to pay to the Territory a small percentage of their receipts, from one only—the Hawaiian Electric Company (Limited)—has the Territory received anything, and this company has, up to June 1, 1906, paid into the Territorial treasury on this account \$25,540.68. The Honolulu Gas Company (Limited), for the term ended June 30, 1906, is indebted to the Territory on account of the 2½ per cent of its gross receipts, \$318.49, and this amount will undoubtedly be paid before it becomes delinquent.

## THE ATTORNEY-GENERAL'S DEPARTMENT.

[By E. C. PETERS.]

The attorney-general is required by law, when called upon, to “give advice and counsel to the heads of departments, the high sheriff, sheriffs, magistrates, and other public officers in all matters connected with their public duties, and otherwise aid and assist them in every way requisite to enable them to perform their duties faithfully;” at the same time he is required to “give his opinion on questions of law submitted to him by the governor, the legislature, or the head of any department.”

It is also required of the attorney-general that he appear for the Territory, personally or by deputy, in all courts of record, in all civil cases in which the Territory may be a party or be interested, consequently this department is called upon to appear in all cases affecting the Territory or in which it or an officer thereof is a party.

Prior to July 1, 1905, the Territorial system of government differed in but few respects from that under the Republic and its predecessors—the provisional government and monarchy. On the last-named date an act of the legislature went into effect providing for counties, each with its county attorney; but as far as this office is concerned the effect was not materially to lessen its work. County attorneys are authorized to appear before the grand juries and prosecute criminal offenses committed within their respective counties, and they have in most instances diligently performed their duty; but upon this office rests the responsibility of criminal prosecutions, and it has been found necessary to appear at the several terms of the circuit courts of the third and fourth circuits and prosecute felony

cases in the first circuit. During this period there has been seemingly an epidemic of murders, this office having personally conducted no less than 15 murder trials, resulting in 10 convictions in the first degree, 5 of whom have paid the death penalty prescribed by law for their offense, and 5 in the second degree. Assistance given this department by county attorneys has been of great value, permitting closer application to the civil litigation.

During this period, among the most important cases in which I have been interested are the following:

Territory of Hawaii *v.* Morita Kaizo, reported in 17th Hawaiian Reports, at page 295. This case involved the question of legality of naturalization of aliens as citizens of the United States by the circuit courts of this Territory. Section 2165 of the Revised Statutes of the United States did not in terms include circuit courts of the Territory, but those tribunals undertook the naturalization of aliens, especially in circuit courts other than that of the first circuit, where is situated the seats of court of the supreme court and the United States district court. Since annexation over 1,200 aliens were naturalized by circuit courts of this Territory, and the question of legality of their naturalization was recurrent, occasioning no little difficulty in respect to criminal prosecutions. The question was finally presented to the supreme court upon a reserved question of law by the judge of the circuit court of the fourth circuit, and the supreme court decided (the chief justice, however, in a concurring opinion expressing much doubt and one of the justices dissenting) that the circuit courts of the Territory had the power of naturalization of aliens as citizens of the United States. An act of Congress confirming such naturalization is certainly advised.

Ex parte Hygashi, reported in 17th Hawaiian Reports, at page 428, was a proceeding in habeas corpus instituted for the purpose of testing the law in respect to criminal prosecutions in this Territory, by complaint or information, in misdemeanor cases. Under the monarchy, provisional government, and Republic but few offenses were not punishable by hard labor, and the Oahu prison, at Honolulu, was the general place of confinement of all persons convicted of criminal offenses within the Territory. Successful pleas in criminal prosecutions had resulted in forcing this office to find an indictment by a grand jury in all cases, irrespective of degree of punishment, the circuit courts having been treated to the ludicrous spectacle of a prosecution for vagrancy or drunkenness upon an indictment by a grand jury. The third legislature sought to correct this condition of affairs and provided for the erection of a jail at Honolulu, to be known as the Honolulu Jail, and provided further that no person convicted of a felony or suffering infamous punishment should be confined therein; nor should any person confined in Honolulu Jail be subjected or compelled to perform labor during the term of his imprisonment. Oahu prison was made the Territorial penitentiary. These provisions of law accomplished a segregation of felons and misdemeanants, but by reason of the fact that the Honolulu Jail adjoined the Oahu prison and was subject to the supervision and control of the warden of that institution, Hygashi claimed that the Honolulu Jail was a part of Oahu prison, and by reason of his detention therein was being subjected to an infamous punishment. The supreme court decided that imprisonment in the Honolulu Jail was not infamous, and for the first time since annexation criminal prosecutions within this Territory proceeded in a regular, methodical, and prompt manner. Under present



conditions offenders are brought to trial before a jury in at least two months after the commission of the offense upon which they stand charged.

The case of *Seattle Brewing and Malting Company v. The Treasurer of the Territory of Hawaii* presented for decision the propriety of a public officer, in the absence of statute, receiving and paying into the treasury money paid under protest. Under the facts it was decided that the money had been paid under protest, and the treasurer, the receiving officer, was personally liable for the amount paid.

The case of *County of Kauai ex rel. John D. Willard et al. v. James L. Holt*, tax assessor of the first taxation division, and *J. K. Farley*, tax assessor of the fourth taxation division, was one which sprung from the provisions of section 1282 of the Revised Laws of Hawaii respecting the county in which corporations should make their returns of income under the income-tax law. The principal place of business of the majority of the sugar plantations of the Territory was by their charters fixed at Honolulu, within the county of Oahu. The counties, for purposes of revenue, receive 50 per cent of the income tax payable within their respective counties, and it was therefore of considerable importance to the county in which the plantation was situated whether the tax payable by the plantation was payable to the county within which the plantation was situated or to the county of Oahu, in which was its principal place of business. The supreme court decided that the tax was payable where the corporation had its principal place of business, which in effect increased considerably the revenue for the county of Oahu, to the detriment of the other counties of the Territory of Hawaii.

The case of the *Trustees of the estate of Bernice Pauahi Bishop v. The Territory of Hawaii* was during this period decided by the Supreme Court of the United States. Its effect, considered with the former decision of *S. N. Damon v. Territory of Hawaii*, reported in volume 194 of the United States Supreme Court Reports, at page 154, was to adjudicate as vested rights all private fisheries within the waters adjoining the several islands wherever held, either by grant or prescription. Thus was terminated a unique series of litigation instituted under sections 95 and 96 of the act of Congress providing for a government for the Territory of Hawaii.

Section 95 of the organic act provides:

That all laws of the Republic of Hawaii which confer exclusive fishing rights upon any person or persons are hereby repealed and all fisheries in the sea waters of the Territory of Hawaii not included in any fish pond or artificial inclosure shall be free to all citizens of the United States, subject, however, to vested rights; but no such vested right shall be valid after three years from the taking effect of this act unless established as hereinafter provided.

Section 96 of the organic act provides:

That any person who claims a private right to any such fishery shall, within two years after the taking effect of this act, file his petition in a circuit court of the Territory of Hawaii, setting forth his claim to such fishing right, service of which petition shall be made upon the attorney-general, who shall conduct the case for the Territory, and such case shall be conducted as an ordinary action at law.

That if such fishery right be established, the attorney-general of the Territory of Hawaii may proceed, in such manner as may be provided by law for the condemnation of property for public use, to condemn such private right of fishing to the use of the citizens of the United States upon making just compensation, which compensation, when lawfully ascertained, shall be paid out of any money in the treasury of the Territory of Hawaii not otherwise appropriated.



Within the two years provided by the statute 82 cases were filed in the local circuit courts by persons claiming a private and vested right to fisheries in the sea waters of the Territory. The first cases to secure decision by the supreme court of the Territory were those of Joseph O. Carter et al., trustees under the will of Bernice P. Bishop, deceased, *v. The Territory*, and Samuel M. Damon *v. The Territory*, decision therein being secured on the 15th day of November, 1902. The Damon case claimed a private right in certain sea fisheries by a recital in the habendum clause in the royal patent grant to the effect that "there is also attached to this land a fishery right in the sea adjoining." In the first-named case the plaintiff claimed private right as pertinent to their land by prescription and ancient Hawaiian custom. The Territory in both cases prevailed and appeals were duly taken to the United States Supreme Court. But the decisions in both cases were reversed by that tribunal, and the Territory now awaits final determination of all pending cases prior to taking the necessary steps to condemn established fishing rights. What the value of these private fishing rights is is difficult of computation, inasmuch as while some fishing rights cover all fish in the sea waters within the boundaries established, some cover only a certain kind of fish, such as mullet, oio, or even in some cases shellfish such as opihi. In any event the cost to the Territory to acquire these private rights upon condemnation proceedings will prove quite large, and it is certainly a matter in which the Territory should secure Federal aid. It would be of great assistance to the Territory should the next session of Congress see fit to appoint a commission to ascertain the probable value of these fisheries and make an appropriation to meet the same, at the same time appointing a special attorney from the Department of Justice to handle all condemnation proceedings instituted under the appropriation.

The case of *Yamanoto v. Alexander Craw*, now pending in the circuit court of the first circuit, is one of moment to the agricultural interests of the Territory. The board of commissioners, under local statutory law in that regard, sought to prevent the importation into the Territory of soil, plants, fruits, or vegetables infested with insects, blight, scale, and diseases injurious or liable to become injurious to trees, plants, or other vegetation of value within the Territory. The defendant, under direction of the board, destroyed some 500 cases of oranges sought to be brought into the Territory at the port of Honolulu, on the ground that the same were infested with blight and scale liable to become injurious to vegetation of value in the Territory. Congress, in whom reposes the constitutional power of regulation of interstate commerce, has not seen fit to protect the several States from the importation of fruit infected with blight and scale, and the case resolves itself into the question of whether or not, in the absence of Federal legislation in that regard, the individual State or Territory can interpose statutory regulation for its own protection. Obviously this case is of considerable importance, and one but need look about upon the fair verdure of Hawaii Nei and discover that her beautiful and fragrant roses are no more—killed and practically exterminated by the introduction of the Japanese beetle.

## HIGH SHERIFF'S BUREAU.

[By WILLIAM HENRY.]

By the provisions of act 39 of the legislature of 1905, creating the various counties in the Territory, the direct and absolute control of the police of the various portions of the country was taken away from the high sheriff of the Territory and vested in the sheriffs of the various counties. This act went into effect on the 1st day of July, 1905, and from that time the high sheriff has not been empowered to nor has he exercised any control over the several police forces of the country.

The legislature of 1905 at its extra session provided an appropriation for the salary of "High sheriff and warden of Oahu Prison and Honolulu Jail," thereby making him custodian of all prisoners convicted of felony in all courts of record of the Territory, and also of all persons imprisoned upon conviction of misdemeanor in any and all of the courts of the Territory of Hawaii.

In accordance with the provisions of acts 58 and 59 of the legislature of 1905, no person convicted of felony has been or now is confined in Honolulu Jail, but all persons who are convicted of felony and subjected to infamous punishment in the various courts of record of this Territory are confined in Oahu Prison, and by such imprisonment are segregated and separated from those confined in Honolulu Jail, in which are incarcerated all persons who are committed or held for trial, or as witnesses, or upon civil process or contempt, or upon conviction of misdemeanor, and no person confined in said Honolulu Jail is subjected to, or compelled to perform, labor or to any other infamous punishment.

In order to carry out to the full extent the letter and the spirit of the two last-mentioned acts, it became necessary to remove all persons who were serving sentence upon conviction of felony in prisons in the Territory other than on Oahu as speedily as possible to Oahu Prison; consequently from the jails at Hilo, island of Hawaii; Wailuku, island of Maui; and Lihue, island of Kauai, the only other prisons in which felons were imprisoned, all such persons convicted of felony or subjected to infamous imprisonment were removed to and are now confined in Oahu Prison.

During the year ended June 30, 1906, it became the duty of the high sheriff to carry out the sentence of death imposed, upon conviction of the crime of murder in the first degree, upon six men confined in the prison, these being duly executed in the yard of Oahu Prison in Honolulu in accordance with law.

An act providing for the parole of prisoners went into effect the 26th day of April, 1905, since which date parole has been granted to four persons. In every instance the person to whom parole was granted is now regularly employed, doing well, and obeying all the rules prescribed.

The number of prisoners received under committal and sentence in the twelve months ended June 30, 1905, was 766, which added to those serving sentences at the beginning of that period made a total of 1,283 prisoners. In the same time 237 were discharged from committal and 780 from serving sentence, by expiration of term and otherwise, leaving 266 prisoners on June 30. The highest number of prisoners at any given time was 285 on August 5, 1905, and the

lowest 224 on February 27, 1906. There was a daily average of 153 criminals, 74 misdemeanants, and 28 committal prisoners, making a total daily average of 255. Labor performed by convicted prisoners was 37,425 days on roads, etc., 19,175 days by males held inside, 2,321 days by women inside, and 2,410 by police station servants, being an aggregate of 61,330 days.

Moneys received at the high sheriff's office and deposited with the treasurer of Hawaii have amounted to \$11,493.76 for the twelve months.

#### ARCHIVES OF HAWAII.

[By R. C. LYDECKER.]

Considerable progress has been made in the preliminary examination of the archives preparatory to their final classification and indexing. All the documents of the foreign office have been gone over, as have those of the different sessions of the legislature, and a good working knowledge of what they consist secured. A partial acquaintance with the documents of several other departments has also been obtained. In addition, visits to Hilo and Lahaina were made and records found, some of which are very valuable.

During my preliminary examination a large number of valuable historical papers have come to light, papers that in some cases add new facts to the present known history of Hawaii, and in others throw new or additional light on that history and which in some cases change the complexion of the event to which they allude.

There is a letter written by Capt. Simon Metcalf, of the *Eleanora*, bearing date of March 22, 1790. The vessel was then at anchor in Kealahakua Bay. The principal interest in connection with this letter is that it is the oldest document thus far found and is written by a man who but a month previous was guilty of the cruel and wanton massacre, off Olowalu, Maui, of a large number of innocent natives. One of the *Eleanora's* boats had been stolen, and in revenge the captain enticed a great number of natives in canoes to assemble around his ship, ostensibly for the purpose of trade, when suddenly a broadside of cannon and musketry was fired upon them, covering the waves with the dead and dying. Over a hundred were killed and many more were wounded.

The famous explorer Vancouver, on the occasion of his last visit here in 1794, left an autograph letter. It is principally in commendation of the different chiefs with whom he came in contact during his several visits, but it also contains a very important paragraph giving his account of the cession, by Kamehameha I, of the island of Hawaii, a transaction that later caused considerable friction between his successors and the British consul at Honolulu. There are other letters bearing on this subject of Kamehameha's cessions, one of which is the retained copy of his letter to George III, in which he announces that "Timoree, King of Atooi, has delivered his island up, and we are now in possession of the whole of the Sandwich Islands." The King then goes on and acknowledges himself as "subject to His Most Sacred Majesty" and asks that a seal and arms be sent him. This letter is dated "Woahoo, August 6, 1810."

The Earl of Liverpool wrote under date of "London, April 30, 1812," and his letter is of interest as showing the attitude of the



British Government in reference to these so-called cessions. Its whole tenor is one of respect to the King's independence, with an implied promise of friendly protection in case of foreign aggression.

One of the most valuable discoveries from a historical standpoint is a journal of the Rev. William Richards, one of the early missionaries, who, at the earnest solicitation of the King, gave up his mission work in 1838 to become the political adviser of the Government. This journal contains copies of the documents that figured in the mission of one Thomas J. Farnham, who was the first envoy sent abroad by the Hawaiian Government on a diplomatic mission. Mr. Farnham, who appears to have been a lawyer from Illinois here on a visit, was in 1840 sent on a secret mission, the knowledge of which was most scrupulously guarded, the King and a few of his most trusted advisers being the only ones conversant with it, and when they passed away the secret was buried with them. Until this journal of Mr. Richards was found no one had any knowledge of the purpose of the mission, but Mr. Richards tells the complete story, and thus a new page is added to Hawaiian history.

The original proclamation of Rear-Admiral Richard Thomas, of the British navy, restoring the Hawaiian flag, has been found. The name of this gallant officer and high-minded gentleman should ever be held in high honor by Hawaii and the services he rendered the country in 1843 never be forgotten. In this connection there are a number of private letters from Lord George Paulet (the officer who had raised the British flag afterwards lowered by Thomas), written during the course of several years after his return to England, the sentiments of which place that officer in a better light than history had recorded him.

Another important document is a certified copy of a letter written on July 14, 1851, by Daniel Webster, then Secretary of State. This letter is addressed to United States Commissioner Luther Severance, and in it the Secretary stated in the most emphatic language the policy of the United States in reference to the independence of the Hawaiian Islands, and that the United States would never consent to see them taken possession of by a foreign power. The occasion that called forth this letter was the action of the Hawaiian Government in placing the islands provisionally under the protection of the United States on March 10, 1851, when they were having serious trouble with the French consul at Honolulu, M. Perrin.

Two copies of the first laws ever printed and promulgated have been found. These are "Regulations for the port of Honoruru, Oahu." They were issued June 2, 1825, and were doubtless drawn up by Lord Byron, of the British man-of-war *Blonde*, he having come here with the bodies of Kamehameha II and his Queen, who had died in London the previous year. There are also a couple of copies of the first criminal code, published in native, December 8, 1827. This contains seven laws forbidding murder, theft, selling of rum, gambling, etc.

The archives contain hundreds of letters written by the chiefs of the time, beginning in 1824, soon after the missionaries had reduced the language to writing. These letters are probably of the utmost value, for they doubtless contain many facts of Hawaiian history now unknown, and they should be translated as soon as possible. They



are written in the pure Hawaiian of the early days, and as many corruptions have crept into the language during the past fifty years or more, the natives of the present day, with few exceptions, have great difficulty in reading them. Some words then in use have dropped out of the language entirely, others have been so changed that in some cases the original meaning is quite reversed. This, with the introduction of new words to some extent to take the place of old ones and also to convey new ideas, creates the utmost confusion in the mind of the average Hawaiian of to-day when attempting to translate such old documents.

Very respectfully,

G. R. CARTER,  
*Governor of the Territory of Hawaii.*

The SECRETARY OF THE INTERIOR.

# APPENDIX.

## TERRITORIAL REGISTER AND DIRECTORY, 1906.

### TERRITORIAL OFFICIALS.

#### EXECUTIVE.

George R. Carter, Governor.  
A. L. C. Atkinson, Secretary.  
E. C. Peters, Attorney-General.  
A. J. Campbell, Treasurer.  
J. H. Fisher, Auditor.  
C. S. Holloway, Superintendent of Public Works.  
W. H. Babbitt, Superintendent of Public Instruction.

J. W. Pratt, Commissioner of Public Lands  
W. E. Wall, Surveyor.  
L. E. Pinkham, President Board of Health.  
William Henry, High Sheriff.  
F. D. Creedon, Private Secretary to Governor.

#### DELEGATE TO CONGRESS.

J. K. Kalaniana'ole.

#### JUDICIAL.

W. F. Frear, Chief Justice, Supreme Court.  
A. S. Hartwell, Associate Justice, Supreme Court.  
A. A. Wilder, Associate Justice, Supreme Court.  
Henry Smith, Clerk, Judiciary Department.  
J. T. De Bolt, First Judge, First Circuit, Oahu.  
Alex. Lindsay, jr., Second Judge, First Circuit, Oahu.

W. J. Robinson, Third Judge, First Circuit, Oahu  
A. N. Kepoikai, Judge, Second Circuit, Maui.  
J. A. Matthewman, Judge, Third Circuit, Hawaii.  
Chas. F. Parsons, Judge, Fourth Circuit, Hawaii.  
J. Hardy, Judge, Fifth Circuit, Kauai.  
P. L. Weaver, Judge, Court of Land Registration.

#### NATIONAL GUARD OF HAWAII.

Col. J. H. Soper, Adjutant-General.

Col. J. W. Jones, Commanding First Regiment.

#### BOARD OF IMMIGRATION.

A. L. C. Atkinson, President.  
John J. Carden, Member.  
Joseph P. Cooke, Member.

John H. Craig, Member.  
E. D. Tenney, Member.

#### BOARD OF COMMISSIONERS OF AGRICULTURE AND FORESTRY.

L. A. Thurston, Commissioner and President.  
W. M. Giffard, Commissioner.  
J. F. Brown, Commissioner.  
A. W. Carter, Commissioner.  
G. P. Wilder, Commissioner.

C. S. Holloway, ex officio Secretary.  
Alexander Crow, Superintendent of Entomology.  
R. S. Hosmer, Superintendent of Forestry.  
Victor A. Norgaard, Superintendent of Animal Industry and Veterinarian.

#### BOARD OF COMMISSIONERS OF PUBLIC ARCHIVES.

A. L. C. Atkinson, Chairman, ex officio.  
Prof. W. D. Alexander, Commissioner.

A. F. Judd, Commissioner.  
R. C. Lydecker, Secretary.

#### FEDERAL OFFICIALS.

##### DEPARTMENT OF JUSTICE—UNITED STATES DISTRICT COURT.

Sanford B. Dole, Presiding Judge.  
R. W. Breckons, United States District Attorney.

J. J. Dunne, Assistant United States District Attorney.  
F. L. Hatch, Clerk.

#### TREASURY DEPARTMENT.

##### CUSTOMS DIVISION.

E. R. Stackable, Collector of Customs.  
R. C. Stackable, Special Deputy Collector.  
Raymer Sharp, Chief Examiner.  
A. B. Ingalls, Examiner and Gauger.  
M. H. Drummond, Deputy Collector and Cashier.  
C. H. Raven, Deputy Collector.

W. O. Aiken, Deputy Collector, Kahului, Maui.  
B. K. Baird, Deputy Collector, Hilo, Hawaii.  
W. D. McBryde, Deputy Collector and Inspector, Koloa, Kauai.  
R. R. Elgin, Deputy Collector, Mahukona, Hawaii.

##### INTERNAL-REVENUE SERVICE.

R. H. Chamberlain, Collector Internal Revenue.  
W. F. Drake, Chief Deputy Collector.  
R. S. Johnstone, Division Deputy.

O. A. Berndt, Deputy Collector-Gauger.  
Lee Sing, Deputy Collector-Cashier.  
Clarence D. Pringle, Storekeeper-Gauger.

# 120 ANNUAL REPORTS OF THE DEPARTMENT OF THE INTERIOR.

## PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

L. E. Cofer, Passed Assistant Surgeon, United States Public Health and Marine-Hospital Service, in Command.  
 Dunlap Moore, Passed Assistant Surgeon.  
 Carl Ramus, Passed Assistant Surgeon.  
 A. N. Sinclair, Acting Assistant Surgeon.  
 William F. James, Acting Assistant Surgeon.  
 E. F. Smith, Medical Inspector.  
 J. E. Beck, Pharmacist.  
 John J. Grace, Acting Assistant Surgeon, Hilo, Hawaii.

John Weddick, Acting Assistant Surgeon, Kahului, Maui.  
 J. B. Malony, Acting Assistant Surgeon, Lahaina, Maui.  
 Harry Cooper, Acting Assistant Surgeon, Koloa, Kauai.  
 B. D. Bond, Acting Assistant Surgeon, Mahukona, Hawaii.

## DEPARTMENT OF COMMERCE AND LABOR.

### IMMIGRATION SERVICE.

R. C. Brown, Inspector in Charge.  
 J. K. Brown, Chinese Inspector.

R. L. Halsey, Immigrant Inspector.

### UNITED STATES LIGHT-HOUSE ESTABLISHMENT.

Capt. J. R. Slattery, Corps of Engineers, U. S. Army, Assistant to the Light-House Engineer, Twelfth District. In local charge of the Hawaiian Subdivision of the Twelfth Light-House District.

### COAST SURVEY DIVISION.

W. D. Alexander, Assistant in United States Coast and Geodetic Survey, in charge of branch office.

### NAVIGATION BUREAU.

Norman Watkins, United States Shipping Commissioner.

## DEPARTMENT OF AGRICULTURE.

### HAWAII EXPERIMENTAL STATION.

Jared G. Smith, Special Agent in Charge.  
 Delos L. Van Dine, Entomologist.  
 Edmund C. Shorey, Chemist.  
 Alice R. Thompson, Assistant Chemist.

J. Edgar Higgins, Horticulturist.  
 F. G. Krauss, Rice Expert.  
 C. R. Blacow, Tobacco Expert.  
 Q. Q. Bradford, Farm Foreman.

### WEATHER BUREAU.

William Stockman, Section Director.

## NAVY DEPARTMENT.

### UNITED STATES NAVAL STATION, HAWAII.

Rear-Admiral Samuel W. Very, Commandant, U. S. Navy.  
 Lieut. Commander James F. Carter, Captain of the Yard, U. S. Navy.  
 Lieut. William R. Cushman, Equipment and Ordnance Officer, U. S. Navy.

Charles G. Smith, Passed Assistant Surgeon, U. S. Navy, Medical Officer.  
 Benjamin H. Brooke, Assistant Paymaster, U. S. Navy, Pay Officer and General Storekeeper.  
 James T. Winn, Carpenter, U. S. Navy.  
 Thomas Dunn, Paymaster's Clerk, U. S. Navy.

### UNITED STATES MARINE BARRACKS.

Maj. John H. Russell, U. S. Marine Corps, Commanding Marines.

First Lieut. Epaminondas L. Bigler, U. S. Marine Corps.

## WAR DEPARTMENT.

### UNITED STATES MILITARY IN HAWAII.

Maj. Robert C. Van Vleet, Commanding.  
 Capt. Charles F. Humphrey, Quartermaster, U. S. Army, Depot Quartermaster and Commissary.  
 Capt. Ross L. Bush.  
 Capt. James V. Heidt.  
 Capt. Ralph E. Ingram.  
 Capt. John B. Schoeffel.  
 First Lieut. James G. Hannah, Battalion Adjutant.  
 First Lieut. John B. Shuman.

First Lieut. Kurtz Eppley.  
 First Lieut. William E. Roberts.  
 First Lieut. Josiah C. Minus.  
 First Lieut. Robert M. Blanchard, Medical Department.  
 Second Lieut. Hiram M. Cooper.  
 Second Lieut. Maynard A. Wells, Battalion Quartermaster and Commissary.  
 Second Lieut. Manuel M. Garrett.  
 Second Lieut. Charles F. Conry.  
 Second Lieut. Rolland W. Case.

## POST-OFFICE DEPARTMENT.

### POSTAL SERVICE, HAWAII.

Joseph G. Pratt, Postmaster.  
 J. T. Stayton, Assistant Postmaster.  
 F. E. Colby, Chief Clerk, Money-Order Department.  
 William McCoy, Chief Clerk, Registry Department.

W. C. Kenake, Chief Mailing Clerk.  
 E. M. Brown, Superintendent of Delivery.  
 George W. Carr, Assistant Superintendent Railway Mail Service.  
 F. J. Hare, Post-Office Inspector.



W.D.ALEXANDER  
WALTER.E.WALL  
SURVEYOR

## 20' 10'

*Boundaries and Topography by*

Map by John M. Donn

00

Specialty Prepared Map of the County of Hawaii for Governor's Annual  
Report, Illustrating Conditions as of June 30, 1906

- 0'

0'





Scale in Miles  
0 5 10 15

NOTE

Latitude should be diminished by 20 Seconds to agree with Adjusted Latitude.

Longitude should be increased by 1 Minute and 58 Seconds to agree with the Tupman Longitude.

Contours show approximate heights - Interval 300 Feet.



20°40'

20°40'

HAWAII TERRITORY SURVEY  
Walter E. Wall, Surveyor.

# KAHOOLAWE

Scale 1 Inch = 40000 Feet

Traced from Gov't Survey Reg. Map No. 1272.

H. E. Newton. October, 1906.



20°30'

20°30'

157°40'

157°30'





# HAWAII TERRITORY SURVEY

WALTER E. WALL  
Surveyor

## KAUAI HAWAIIAN ISLANDS

1903

### LEGEND

Specialty Prepared Map of the County of Kauai for Governor's Annual Report, Illustrating Conditions as of June 30 1903

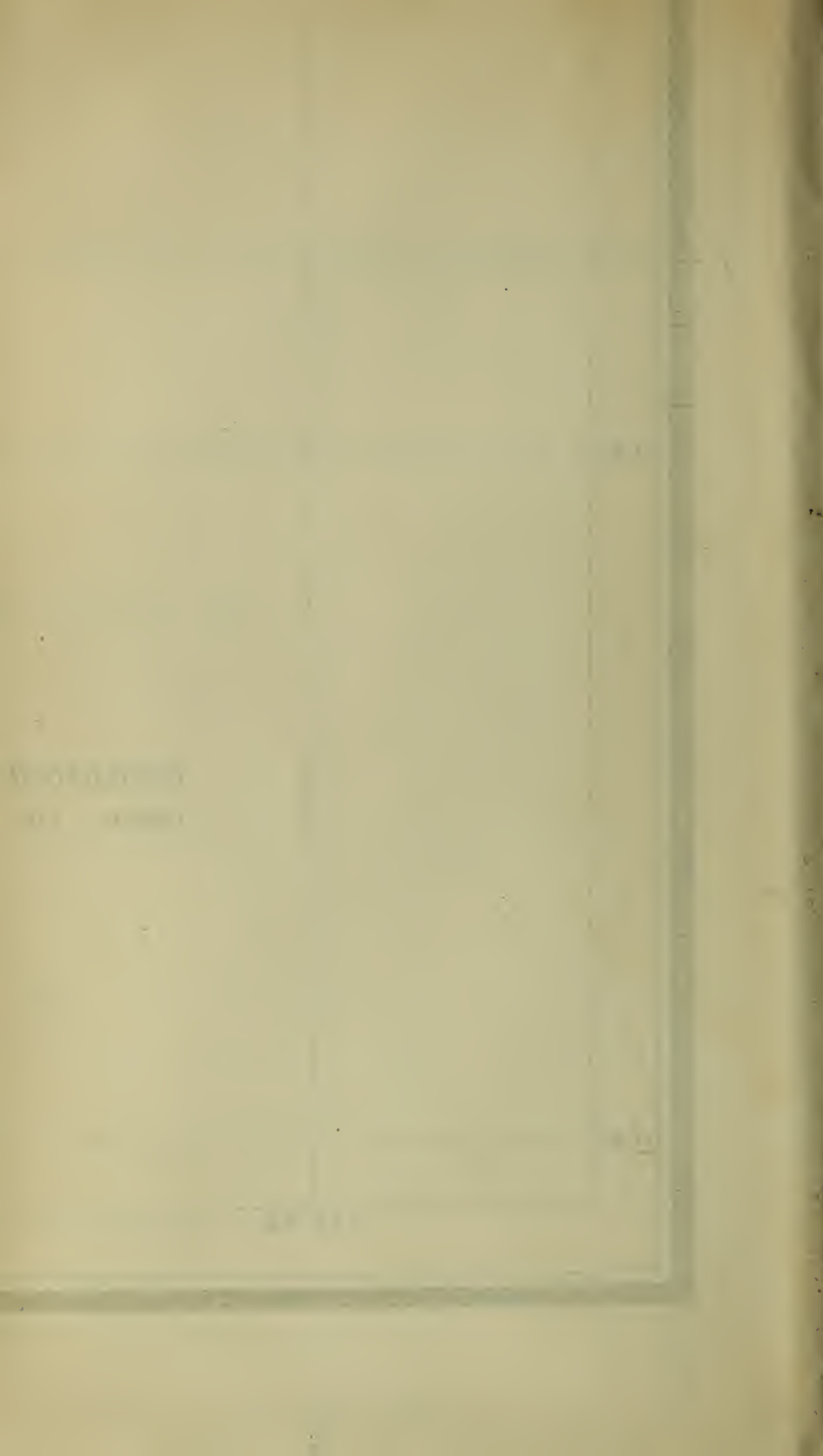
- Public Lands.
- Homestead Settlement Tracts.
- Approximate Area of Grazing Lands.
- Approximate Area of Sugar Plantations.
- Forest Reserves.
- Approximate Area of Forests Lands not in Reserves.
- Approximate Area of Wet Lands (Rice and Taro).
- Schools.
- Post Offices.



Compiled by John M. Donn from all available data in the office and from private surveys.

Scale in Miles









LANAI

GOVERNMENT SURVEY

1878

Scale of Feet

Walter E. Wall, Surveyor.  
Triangulation, Topography, Boundaries  
and Map by  
J.F. Brown and M.D. Monsarrat.

Traced from Govt Survey Reg. Map No. 1394  
H.E. Newton. September, 1906.

Note:—  
Latitude should be increased by 21 Seconds  
and Longitude by 9 Seconds to agree with  
the Adjusted Latitude and Longitude.





M O L O K A I

△ Moku Lee

△ Pihemaia

L A N A I

△ Kaopua

△ Puu Moku

M A U I

△ Pelepele

△ S. Pass

△ Oahu

HAWAII TERRITORY SURVEY

WALTER E. WALL  
Surveyor

MAUI COUNTY

HAWAIIAN ISLANDS

Scale, 17 Miles to 1 Inch

K A H O O L A W E

△ Pihemaia

157° 20'

157° 10'

157° 00'

156° 50'

156° 40'

156° 30'

156° 20'

156° 10'

156° 00'

20° 40'

20° 30'

21° 10'

21° 00'

20° 50'

20° 40'

20° 30'

THE UNIVERSITY OF CHICAGO

ALFRED CORNELL

DEPARTMENT OF CHEMISTRY

CHICAGO, ILL.



# HAWAIIAN GOVERNMENT SURVEY.

W.D.ALEXANDER. Surveyor - General.

## MAUI

## HAWAIIAN ISLANDS.

Primary Triangulation by W.D.Alexander and S.E.Bishop.

Boundaries and Topography by W.D.Alexander,

C.J.Lyons, M.D.Monsarrat, F.S.Dodge, S.E.Bishop,

E.D.Baldwin and W.R.Lawrence.

Map by F.S.Dodge.

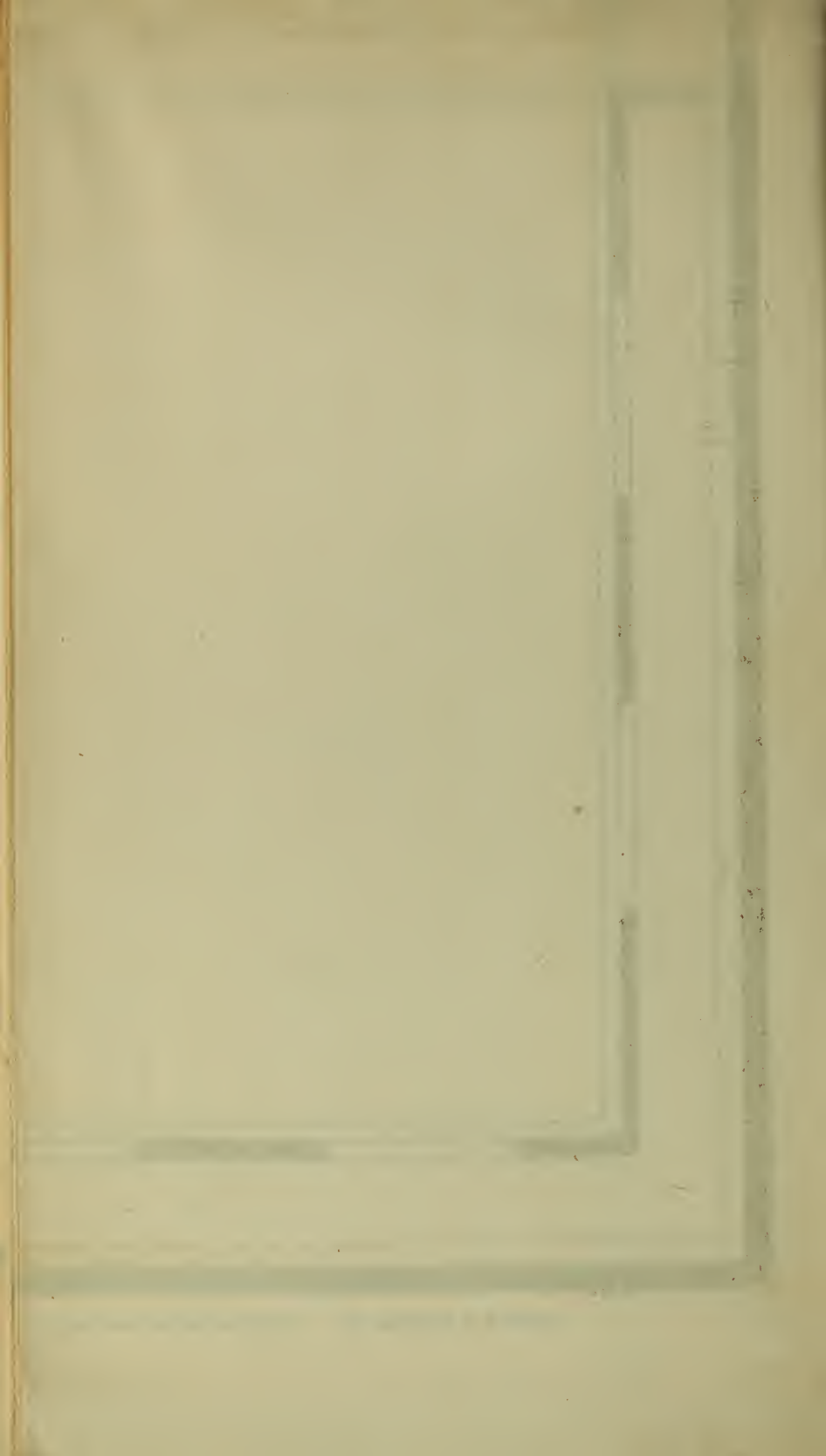
Scale 1:60000

1885.

*Brought up to date in 1903  
by John M. Donn*











HAWAIIAN GOVERNMENT SURVEY.  
W.D.ALEXANDER. Surveyor-General.

W.D.ALEXANDER.      Surveyor-General.

# MOLOKAI

Triangulation by W.D.Alexander and M.D.Monsarrat.

Topography and Boundaries by M.D.Monsarrat.

Map by F.S.Dodge, C.J.Willis and S.M.Kanakanui.

Scale. 1:60000

1897.



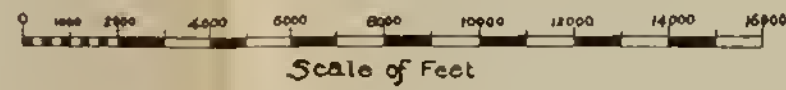
## HAWAII TERRITORY SURVEY

Walter E. Wall, Surveyor.

## NIH A U

HAWAIIAN ISLANDS

1904.

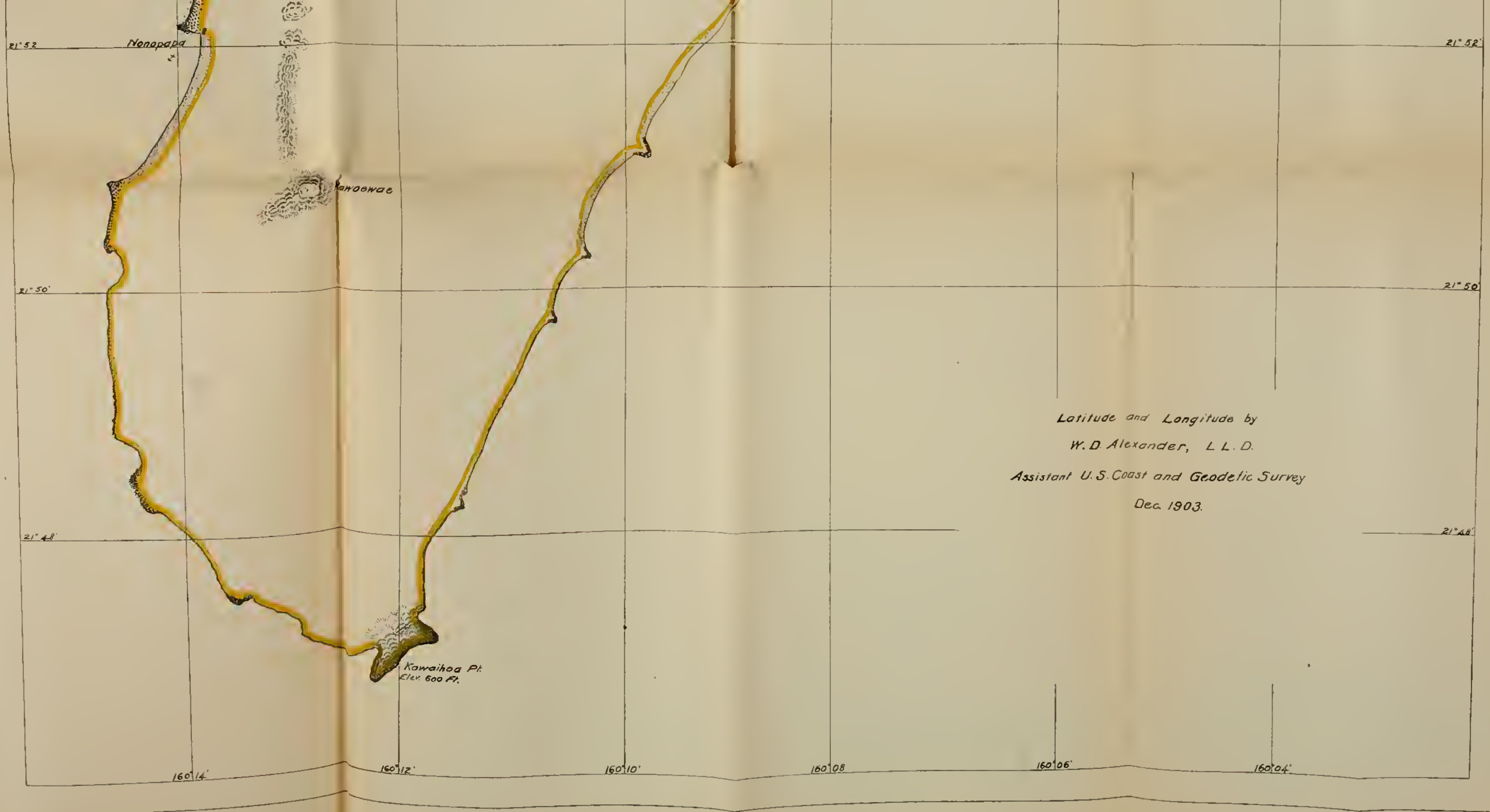


*Survey and Map by S. M. Kerns.*

Traced from Gov't Survey Reg. Map No. 2248.

*H. E. Newton.      October, 1906.*





Latitude and Longitude by  
W.D. Alexander, L.L.D.  
Assistant U.S. Coast and Geodetic Survey  
Dec. 1903.





# OAHU

## HAWAIIAN ISLANDS

Compiled from all available data in the office  
and also from private surveys, by John M. Donn

1902

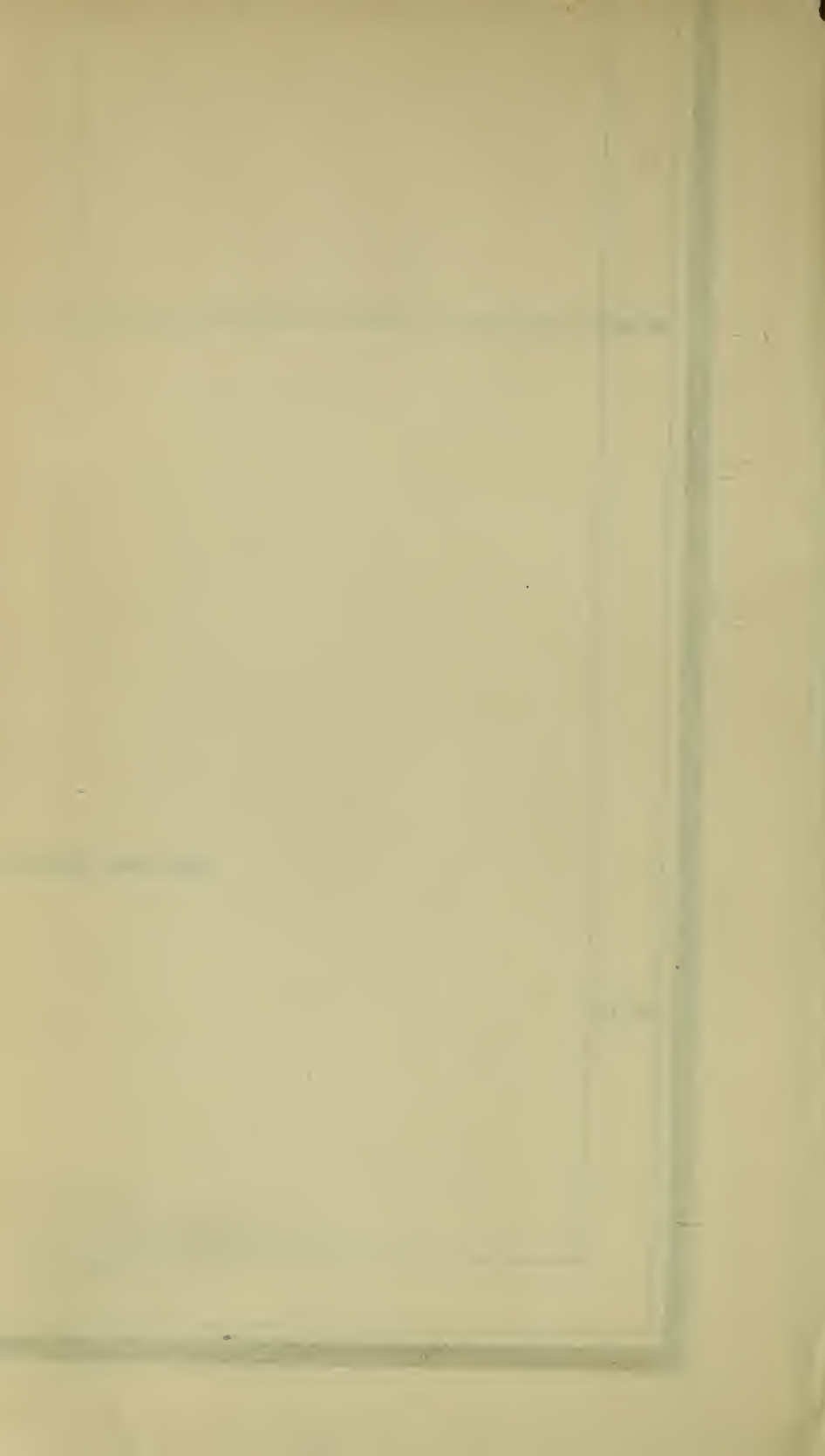
### LEGEND

Specially Prepared Map of the County of Oahu for Governor's Annual  
Report, Illustrating Conditions as of June 30, 1906

- Public Lands.
- Sisal Plantations.
- Homestead Settlement Tracts.
- Approximate Area of Grazing Lands.
- Approximate Area of Pineapple Lands.
- Federal Reservations.
- Approximate Area of Sugar Plantations.
- Forest Reserves.
- Approximate Area of Forest Lands not in Reserves.
- Approximate Area of Wet Lands (Rice and Taro).
- Schools.
- Post Offices.







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REPORT OF THE BOARD OF INDIAN COMMISSIONERS.

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# REPORT OF THE BOARD OF INDIAN COMMISSIONERS.

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WASHINGTON, D. C., *March 12, 1907.*

SIR: We have the honor to submit the Thirty-eighth Annual Report of the Board of Indian Commissioners. The purchase and inspection of supplies for the Indian Service has received from this board the attention and cooperation called for by the law and regulations and by the precedents and customs of the board. We submit herewith, as Appendix A, the special report of our purchasing committee, made to the chairman of this board for transmission to you. In that report the dates and places for opening bids for Indian supplies, inspecting samples, and awarding contracts, together with specific statements as to the assistance and cooperation given by members of the board, are given in detail.

## GENERALLY SATISFACTORY FEATURES OF INDIAN ADMINISTRATION.

As contrasted with the state of affairs in Indian administration when this board was created, nearly forty years ago, the present condition of the Indian Service is such as to gratify all true friends of the native American races.

There is most marked improvement in nearly every respect; and notwithstanding the dangers which still threaten the Indians from intemperance, we believe that, on the whole, their prospects are more promising than ever before. Those who study carefully the history of the treatment accorded the Indian tribes by the Government have to admit a certain justice in that biting phrase of Helen Hunt Jackson, which stigmatizes the century from 1776 to 1876 as "a century of dishonor" in the Government's treatment of Indian tribes. But even as applied to that century the phrase carries a grossly exaggerated criticism, and for the last thirty years the legislation of Congress concerning Indians, their education, their allotment and settlement on lands of their own, their admission to citizenship, and the protection of their rights, makes, upon the whole, a chapter of political history of which Americans may justly be proud. Considering the fact that the "spoils system" of making appointments in the Indian Service has controlled in the naming of Indian agents almost to the present time, and that the fight against civil-service principles in the appointment of teachers and employees in the Indian Service was prolonged and bitter, there is occasion for the greatest gratification at the comparative excellence of the Indian schools and the Indian Service generally for these last ten years. In legislation and

administration the manifest determination of our Government to give protection to the rights of conquered and vanishing races of aborigines has been altogether exceptional in the political history of mankind. So far as we are aware no other nation has ever come so near to exercising a kindly and conservative guardianship over conquered aborigines.

The white man's greed of land, it is true, led to the relentless crowding of Indian tribes westward and the marking out of new Indian reservations, and the reservation policy of the Government, although designed to be helpful, proved upon trial to be in many ways injurious to the Indians. But as fast as the public conscience has been enlightened regarding the effects of reservation life upon the Indians, in Congressional action and in departmental administration the Government has manifested a most intelligent and persistent determination to do away with the evils of that policy by breaking up reservations and bringing individual Indians, through the schools and by the allotment of lands in severalty, into the body of American citizens. During the last three decades it has often seemed to the men and women of clearest vision and highest ethical standards that the Government has been slow in making needed changes to do away with the evils of reservation life. But students of political history and of the methods of governmental administration in other countries and in other centuries must admit that when allowance is made for the conservatism which always characterizes administration through official bureaus with large bodies of subordinates, the United States Government in its administration of Indian affairs has shown a spirit of systematic progress in the recognition of the highest ethical standards which is upon the whole exceptional in the history of civil administration for dependent races in any land.

The general allotment act of 1887, providing for land in severalty; the efficient system of day schools and boarding schools for the education and industrial training of Indian children; the steadfast determination by legislation and administration to protect allotted Indians for a period of twenty-five years against the efforts of white men to get possession of their allotted lands; and the maintenance of high standards of equity by leading Senators and Representatives in Congress in shaping the legislation which disposes of the surplus lands of Indian reservations, are upon the whole (notwithstanding some painful exceptions) justly a source of pride to thoughtful American citizens.

#### **PRESENT INTELLIGENT AND EFFICIENT ADMINISTRATION OF THE INDIAN BUREAU.**

With the changes which have occurred after national elections in the Cabinets of successive Presidents and the consequent changes in the office of the Commissioner of Indian Affairs during the last forty years, this Board has witnessed marked changes in the spirit and the efficiency of Indian administration. At certain periods it has seemed that by the inexperience or the carelessness of newly appointed officials much which had been gained for a time has been lost again. Yet there has been upon the whole steady and material progress. During the eight years while the Hon. William A. Jones was Commissioner of Indian Affairs, from 1897 to 1905, the longest



term of service of any Commissioner of Indian Affairs, there was marked progress in every branch of the service.

It is matter for congratulation, in the opinion of this board, that in the present Commissioner of Indian Affairs the Bureau has at its head one who came to the office with a more thorough and comprehensive knowledge of the actual condition of affairs on Indian reservations and in the Indian Service than any one of his predecessors had possessed on assuming the duties of the position. After nearly two years of cooperation with Commissioner Leupp in his administration of Indian affairs, it seems to this board that without forgetting the excellent service of his predecessors, the friends of the Indian may feel assured that there has never been at the head of the Indian Bureau a Commissioner whose knowledge of the needs of the Indian was more exact and comprehensive or whose purpose to serve the best interests of the Indians in his administration of the office was more manifest or more likely to work out good results for the Indian race. The fact that we find the purposes and the administrative acts of the present Commissioner of Indian Affairs so generally along the line of what seems to us the wisest and most helpful action for the Indians, makes such cooperation as this board can render a most gratifying service on our part, and gives to the board confidence that in the few particulars where our opinion and judgment may differ from those of the present Commissioner there will be a friendly and considerate comparison of views and an absolutely identical purpose—the effort to lead Indians into intelligent and useful citizenship in our American life.

#### **NEW FEATURES IN INDIAN ADMINISTRATION WHICH ARE ESPECIALLY COMMENDABLE.**

The present policy in the administration of Indian affairs may be characterized as a policy which emphasizes self-help, opens the way for it, and leads the Indians out from reservation life and tribal life into the economic, social, and civic life of American citizens.

The successful inauguration of systematic efforts through an employment agent to secure for the Indians opportunities for well-paid labor among white people in various parts of the Southwest have been most promising.

The plan for the introduction upon a large scale of the raising of sugar beets upon land leased from Indian reservations for a term of years under contracts to be approved by the Department, the whole plan being especially designed to provide steady and remunerative employment near their homes for large numbers of Indian men, women, and children, which has been outlined by Commissioner Leupp and recommended by him for legislation, seems to us to be worthy of trial and in every way promising for the industrial future of the Indians. We hope that it may be tried on a large scale, and we heartily commend it to the attention and the favorable action of Congress.

The friendly emulation and the pride in the success of their fellow-Indians in agriculture, stock-raising, and home making, which have been stimulated by the agricultural fairs held by the Indians for the last two or three years, have had a helpful effect upon agriculture and stock raising by Indians.

The recommendation of the Commissioner of Indian Affairs, approved by the Department of the Interior and now embodied in legislation, that white children be admitted to schools established for Indian children, in order that Indian children may have the benefit of school life with English-speaking children from the homes of white people, we believe is most promising in its evidently good effect upon the Indian children, and through them upon Indian parents. We believe that it will tend to extinguish race prejudice on both sides, and to qualify the children of Indians who have received allotted lands to enter heartily and naturally with their white neighbors into the local interests and the home life of the communities where they dwell.

It grows more evident with each year that in dealing with children of Indian parents, who have never been taught to estimate aright the value of regular hours and of systematic habits, a compulsory school law is even more necessary than it is among the children of white parents. We trust that such a compulsory school law for Indians may speedily be enacted.

As the Omaha Indians were among the first to receive lands in severalty, it is interesting to note the progress made on the old Omaha reservations in the towns of Pender and Bancroft, Nebr., in the establishment of public schools where over 80 of the Omaha children attend school with white children. The testimony of the superintendent is that there are no complaints from anyone in these "district schools," and that Indian children meet with fair treatment. The discontinuance of the Omaha boarding school at the request of the Omaha Indians, the building of public schools within the limits of the old reservation, and the friendly intercourse of Indian children and white children in these schools without objection from the parents of either, seem to us to indicate the method by which our system of schools for Indian children may be merged in the general school system of our States.

**THE GOVERNMENT SHOULD PROVIDE THE EQUIVALENT OF THE PROCEEDS OF ANNUAL SCHOOL TAXES WHERE INDIAN ALLOTMENTS ARE UNTAXED.**

In connection with the notable progress made in this respect in school matters on the old Omaha Reservation in Nebraska, we ask especial attention to the fact that the Federal Government, which, as trustee, holds the lands of allottees in trust untaxed, has made provision for paying in these Nebraska schools an amount per capita for all Indian children who attend the common school, equal to the amount which is paid per capita by the State of Nebraska for the white children who attend the same schools. For several successive years this board has called attention to the need of such a provision for schools and for certain other local interests, such as roads, bridges, and courts, which are kept up by State, county, and town taxes, in those districts where a large proportion of the land in a town or county is held exempt from taxation by Indian allottees. It was hardly to be expected that white taxpayers in any county or town could be brought to regard as desirable neighbors—to consider as fellow-citizens entitled to like privileges with themselves—Indians

whose lands remained untaxed, while their white neighbors were compelled by increased taxation to pay for the schools, roads, bridges, and courts for the advantage and protection alike of the untaxed Indians and the taxed whites. The failure to enforce the statutes of the State of Washington against the sale of liquor to Indians illustrates this same point. In July, 1906, the prosecuting attorney of the county in which is situated the Yakima Reservation informed the superintendent in charge of that reservation that since the Indians did not pay taxes he (the prosecuting attorney) did not propose to put the county to any expense in prosecuting for crime among them, or to give them protection by law when crimes were committed on the reservation; and the district attorney adds that this policy "is in accordance with the instructions of the county commissioners." The need of making special provision for funds for the support of schools and of local government in parts of States where Indian lands remain untaxed for twenty-five years is also very evident to all who know the utter lack of country schools in those parts of the new State of Oklahoma which have been heretofore Indian reservations in the Indian Territory. We call attention to this matter in a later section of this report.

#### **GREATER ACTIVITY IN PROHIBITING THE SALE OF LIQUOR TO INDIANS AND ON INDIAN ALLOTTED LANDS.**

From their visits to Indian reservations, and from constant correspondence with Indian agents and with superintendents of Indian schools, the members of this board have felt most keenly how seriously the traffic in intoxicating liquors threatens the morals, the progress in citizenship, and the very physical existence of the Indians. It is with very great satisfaction that we note the recommendations of the Commissioner of Indian Affairs in favor of enlarged authority for employees and officials in the Indian Service to prosecute those who sell liquor to Indians, thus making more effective the laws which forbid the sale of liquor to Indians. The cooperation of Congress in furnishing the larger appropriations for this purpose which have been requested by the Secretary of the Interior and the Indian Bureau, is gratifying. The terrible ravages of the drink habit have already rendered almost hopeless the future of certain groups of Indians who first received allotted lands in severalty. The decision of the United States Supreme Court, that Indians allotted under the general allotment act of 1887 could not be kept under special restrictions by the Indian Bureau regarding the use of intoxicants and the purchase and sale of intoxicating liquors, has seemed to threaten the very existence of certain tribes where allotments had been already made.

#### **OBJECTIONABLE FEATURES OF THE BURKE LAW.**

We have understood that it was largely the wish on the part of the present Commissioner of Indian Affairs to protect allotted Indians against the evils which follow the sale and the use of intoxicants, which led him to advocate the amendment to the general severalty act, known as the Burke law, by which Indians allotted after May 8,



1906, do not become citizens by virtue of allotment until after the expiration of twenty-five years, the period covered by the protected title to their lands—the trust deed from the United States which keeps Indian allotments inalienable and untaxed for that length of time.

Clearly as we recognize the evils of the liquor traffic among the Indians and greatly as we desire active efforts on the part of the Government to protect the Indians against the evil of drink, we regret this modification of the allotment law, designed to keep Indians out of citizenship for twenty-five years after they receive their allotments. We think that this prolonged period of exclusion from the duties and rights of citizenship is too heavy a price for the Indians to pay for protection by the Indian Bureau. Most of the Indians who will receive allotments hereafter will have attended some school. A good proportion of them are now, and more of them at the time of their allotments will be, far better qualified to become citizens of the United States than are many of the foreign emigrants who, as recently naturalized citizens, are voters in many of our States. Most of all we deprecate the change, because it involves the perpetuation for from twenty to fifty years longer of a distinct class of "Indians untaxed and not citizens," to be cared for as special wards of the nation by an Indian Bureau, with all the machinery essential to its maintenance.

We do not forget that provision is made in the Burke law for the earlier admission to citizenship at any time of such Indians as the Secretary of the Interior in his discretion may see fit to admit to that privilege. But the entire aim of the law is *to take away from the Indians that presumption in favor of immediate citizenship coming with the allotment of land in severalty*, by which the wise statesmanship of Senator Dawes and others who framed and carried into effect the Dawes Act of February, 1887, proposed to train Indians for citizenship by intrusting them at once, on allotment, with the duties and the conscious responsibilities of active, local citizenship, and with the manhood-stimulating right of suffrage, while the homestead was made inalienable and was freed from taxation by the United States trust deed for twenty-five years.

#### EARLY ABOLITION OF THE INDIAN BUREAU AND ALL SPECIAL LEGISLATION AND ADMINISTRATION FOR INDIANS.

For the last eight or ten years we have strongly advocated the use of all right measures for putting an end as soon as possible to "the Indian problem," the Indian Bureau, Indian tribal funds, and special legislation for Indians. Allotment of land in severalty, to break up Indian reservations, and the division of Indian tribal funds into individual holdings upon the books of the United States Treasury, with payment to individual Indians as soon as they should prove themselves fitted to receive and use their share of the funds, we have earnestly advocated. We have believed, and we still believe, that these two great measures, in connection with a system of Indian schools which shall be as rapidly as possible merged into and united with the common schools of the States and Territories where allotted Indians reside, point the way to the early and natural abolition of the Indian Bureau and of all special class legislation for Indians. We shall deeply regret the recent modification in the general allotment

act for Indians if the result of it shall be, as it threatens to be, a distinct and prolonged perpetuation of special departmental control of Indians and Indian affairs. The only way out of the many embarrassments and difficulties of the "Indian problem," we believe, lies in the assimilation of Indians into the body of American citizens by their assuming as fast as possible the duties and the responsibilities of localized citizenship and sharing in a common local life with their white neighbors in matters of voting, local self-government, and the administration of local affairs.

We trust that there will yet be statesmanlike legislation enacted which shall make provision from surplus lands or from Indian trust funds for the equivalent of the proceeds of local taxation of Indian untaxed lands and for the building up of rural schools in what was the Indian Territory, now a part of the new State of Oklahoma. We must regard it as distinctly a step backward in the administration of Indian affairs, if all future allotments of land in severalty to Indians are accompanied by provisions which perpetuate the control of allotted Indians by the Indian Bureau for twenty-five to fifty years in the future. However benevolent may be the intentions of those who from time to time manage that Bureau, we think that the danger to the Indians from overmanagement and too much governmental control are greater than the dangers from too little control. Fitness for self-government can come to men only by their being intrusted with authority and opportunity to begin to govern themselves.

#### BREAKING UP OF TRIBAL FUNDS INTO INDIVIDUAL HOLDINGS.

The measure drafted some years since by the secretary of this board, in accordance with the recommendation made by President Roosevelt in his first message to Congress in 1901, for the breaking up of tribal funds into individual holdings on the books of the United States Treasury, has been made the basis of proposed legislation in Congress. H. R. bill 5290, introduced by Representative Lacey, of Iowa, while it advocated the central idea in this measure, differed from the plan proposed by this board materially, in that *it did not provide for a fixed date in the near future on which the funds to the credit of any tribe shall be divided among the Indians who are living at that date, and did not provide that no Indian children born after such a fixed date shall become shareholders in the tribal funds.* We regard the fixing of such a date and the preclusion of repeated modifications in the number of shareholders by the enrollment as shareholders of the babies born each six months, as very important in any legislative measure which attempts to be final in its distribution of tribal funds. The bill (H. R. 5290) as introduced by Mr. Lacey was so materially amended before it became a law that it does little more than "make a beginning" of dividing tribal funds into individual holdings and paying them over to individual Indians who are qualified to use them. But since it makes a beginning, we are glad to see it a law. For the principles which prolonged study of the Indian question leads us to believe should characterize such legislation, we respectfully refer to our Annual Report for 1901, pages 4 to 8, and for 1904, pages 5 to 10.

**GREATER DANGER NOW FROM TOO MUCH LEGISLATION THAN  
FROM TOO LITTLE LAW FOR INDIANS.**

Twenty years ago all friends of the Indians complained of the white man's greed of land and the Indian's entire lack of law for the protection of his land and his personal rights. We needed and we have secured legislation to protect the Indians in their right to land, to enable Indians to become American citizens, and to secure to them their right to an education, and to equal protection with whites by the laws of the United States. But much of the land which had been set apart in vast tracts as Indian reservations at a time when it was regarded as of little value, has now come to be of great value. The more dense population of the West and Southwest, the newly developed national system of irrigation which is developing good arable land in what had been regarded as worthless tracts of desert, and the rich deposits of minerals, oil, and asphalt have all contributed to this great increase in the value of Indian lands. Indian tribes who were thought to be poor and landless a generation ago, have now become rich capitalists. The old Indian Territory has been for the last ten years the center of interest in Indian lands, with their deposits of oil, coal, and asphalt. Only those who attempt to watch the almost numberless bills and amendments which are offered in Congress bearing upon Indian affairs can realize how great is the mass of such legislation which is attempted—legislation prompted in part by the wish of friends of the Indians to secure the breaking up of the old tribal and reservation life, but in still greater part by the desire of white men and Indian-claim lawyers to get possession for themselves of portions of Indian lands, Indian mineral wealth, and Indian tribal funds.

In the rapid settlement of the Indian Territory and Oklahoma by whites, for the last few years since the Federal Government determined to break up the tribal governments of the Five Civilized Tribes, there has arisen a state of affairs which demands consideration and relief, quite as much for the sake of the white settlers in Indian Territory as for the sake of the Indians themselves. The whites in the old Indian Territory outnumber the Indians more than ten to one. The only schools in the country districts of the old Indian Territory have been the tribal Indian schools established for Indian children only. *An entire school population of white children in the Indian Territory has grown up and passed through the school age entirely without schools of any kind!* The illiterates in Indian Territory are 260 to the thousand! It is a situation without precedent in the history of the country. The allotment of land to Indians in severalty, with the throwing open of vast regions to white settlers upon leased lands or purchased surplus lands, has made it inevitable that there should be modifications (in the interest of white settlers) of those laws and methods of administration which were at first established in the interest of Indians when white settlers among them were comparatively few.

But friends of the Indians in Congress, in the Indian Bureau, and throughout the country are called upon to watch carefully lest *much of the good which has been accomplished* by wise legislation and ad-



ministration for Indians *be ruined by new legislation pressed through Congress in the interest of white settlers in the old Indian Territory and Oklahoma.*

This Board wishes here to record its high estimate of the steadfast integrity and absolutely unflinching devotion to principle which seem to us to have been shown by the Secretary of the Interior for the last six years (Secretary Hitchcock) in his determination to protect the property rights of Indians against illegal impositions by whites. It is our conviction that the next two or three years will call for especial vigilance on the part of all friends of the Indians to see to it that the rights and interests of the Indians are protected in the breaking up of reservations, the sale of the surplus lands which Indians do not need for homesteads, the provision made by law and by administrative regulations for the protection of the allotments of minors and of aged and helpless Indians, and for the sale and inheritance of allotments of deceased Indians.

**INCREASING IMPORTANCE OF ACCURATE REGISTERS OF NAMES AND AGES OF ALL INDIANS AT AGENCIES, AND OF MARRIAGES, RELATIONSHIPS, BIRTHS, AND DEATHS.**

For six or seven years we have strenuously urged the complete and *immediate registration*, by Indian agents and superintendents, of *all the Indians at each agency and subagency*, with the regulation of marriages by license and registration, and the *keeping of a careful record of marriages, births, and deaths* at each agency. For something like six years it has been a nominal requirement of the Indian Bureau that such complete registration be made at each agency and subagency. Carefully prepared books of record, and blank forms, were some six years ago issued to all agents for this purpose. We have annually called attention to the great importance of making this work of registration full and accurate. In our last annual report the tabulated results of correspondence with agents about this matter were given. There are still many agencies at which this important matter is entirely neglected. There are few where it is well done.

Each added year makes more manifest the pressing need of such records. If records of this kind had been made and kept for the last ten years it is hardly too much to say that hundreds of thousands of dollars would have been saved to the Indians from claim agents and "land sharks," and tens of thousands of dollars of expense, in making out rolls of Indian citizens in Indian tribes, might have been saved to the Government.

The Burke bill, passed last year, which makes it mandatory on the Secretary of the Interior to "ascertain the legal heirs of such allotted deceased Indians," and makes the Secretary's decision "in all respects final and conclusive," emphasizes afresh the need of this registration of families. *We do not think there is any good reason why this registration should not be completed next year at every agency and subagency*, except among the Navaho, where more time would probably be needed. Again we urge upon the Department the need of the systematic requirement of reports from agents and superintendents upon the progress of this work of registration, and of systematic periodic inspection of such agency registers and rolls.

And we respectfully commend to Congress the consideration of legislation (if legislation is necessary) to insure the prompt preparation and the careful maintenance at each agency of these registers of all Indians and of family relationships.

#### ALLOTMENT OF LAND TO INDIANS.

During the fiscal year 1906 only 3,000 additional allotments to Indians were made, and only 4,000 patents were issued.

#### OUTFIT OF SURGICAL INSTRUMENTS NEEDED FOR EACH AGENCY.

We renew our suggestion that appropriate care for the health of the Indians demands that the medical practitioner at each agency or subagency where a medical man is stationed should be provided, at the expense of the Government, with a good set of such surgical instruments as are needed in case of accidents and of ordinary operations.

#### PAY OF INDIAN POLICE.

It is gratifying to note the recommendations made in the past by the present Commissioner of Indian Affairs in favor of an increase of pay for the Indian police. The service of these men has been invaluable in maintaining law and order on Indian reservations. As a rule the men have been remarkably faithful in the performance of their duty. We do not think that their pay is yet adequate. We heartily recommend an increase of pay to officers and men in the Indian police service.

#### HOMELESS INDIANS OF NORTHERN CALIFORNIA.

The appropriation by Congress last year of \$100,000 to be used in securing land on which might be established, in homes of their own, the scattered, landless, and homeless Indians of northern California, and the appointment of Mr. C. E. Kelsey, of California, who has for some years been interested in this problem, as a special agent to investigate and report plans for the relief of these Indians, are steps by the Government toward solving a problem in which good people of California and friends of the Indians throughout the country have long felt a keen interest. Of the 17,000 full-blood Indians in California about 9,000 are scattered through the State in groups of from 20 to 250, with no land of their own, and heretofore without any attempt on the part of the Government to provide reservations or allotments for them. Most of them are in conditions of penury and misery. Of something more than 1,000 mixed-blood Indians in California over 800 are without homes. It is to be hoped that the efforts of Mr. Kelsey, with the appropriation placed at the disposal of the Department for the purpose of relieving these Indians, may materially change conditions for the better during the current fiscal year.

**MONTAUK INDIANS IN NEW YORK ARE TO HAVE THEIR "DAY IN COURT."**

In 1906 the legislature of New York passed an act to enable the Montauk tribe of Indians in that State to maintain suit to establish their rights to certain lands claimed by them, situated at the extreme eastern end of Long Island. Without expressing any opinion as to the equity of the claims of these Indians, it has seemed to us for years that the State of New York should by law enable these Indians to appear in court and have their claims adjudicated. Through a committee of this board and by interviews and correspondence we have sought in past years to secure for these Indians an opportunity to appear in court. We trust that the result of the law passed last year may be the opening of a way for the Montauk Indians to test in court their claim to the land in question.

**TEACHING PRINCIPLES OF AGRICULTURE AND METHODS OF FARM WORK TO INDIAN CHILDREN.**

We can not express too strongly the gratification which we feel at the greater prominence which is being given from year to year to the effort to teach in Indian schools the simple principles and the elementary methods of such agriculture, farm work, and care of stock, as all Indian boys and girls whose future life is likely to be passed in farming communities should become acquainted with during their school years. We trust that still more of time and prominence will be given to this kind of instruction and to school gardens and experimental farms in connection with the Indian day schools and boarding schools.

**PROBLEM OF WATER FOR IRRIGATION FOR THE PIMA INDIANS.**

The provision of a water supply for the Pima Indians has had the interest and the earnest efforts of this board for the last eight years. Delays and disappointments have been numerous. It is with especial pleasure that we include in our report the following statement of the situation, furnished us in the following authoritative form by the Indian Bureau at the date of our annual meeting:

MARCH 1, 1907.

In the project for irrigating the Pima lands the Indian Office was confronted with all the perils, delays, extra costs, and inconveniences of a complete separate engineering undertaking, although the original appropriation had been procured on the basis of a reclamation-service project. After a careful examination by the chief engineer of the Indian Service and a consultation between him and the engineers of the Reclamation Service, the conclusion was finally reached that the most economical and promising plan was for the Indian Office to subscribe for a 10,000-acre water right on behalf of the Indians, putting them practically into the position of members of the water users' association organized for utilizing the water made available by the Roosevelt dam. On the strength of this tentative arrangement the Commissioner procured from Congress the following item of legislation, included in the Indian appropriation act passed in March, 1907:

"That the Secretary of the Interior may, in his discretion, use such part of the three hundred thousand dollars heretofore appropriated for an irrigation system for the Pima Indians in the payment of such Indians' proportionate part of the construction of the Salt River project, and such funds may be



transferred to the reclamation fund, to be expended by that service in accordance with its rules and regulations, the Indians to receive a credit upon the reclamation charge assessed against their lands under the Salt River project for the amount so transferred."

It has been agreed that \$100,000 of the Pima appropriation shall be immediately diverted to the reclamation fund as an advance payment on the 10,000-acre water right, so as to hurry the construction of the power transmission line from the existing power plant of the Reclamation Service to the Pima Reservation, and that the Reclamation Service shall construct the power plant, canals, ditches, etc., needed on the reservation, though the Indians' interests shall remain an independent entity, and be administered in the manner most suitable to their condition.

The total cost for the water right, which is in effect a perpetual power right, will approximate \$250,000. It is expected by the Reclamation Service that, unless unforeseen obstacles intervene, the power will be available and the power plant and transmission line on the reservation operative and water supplied to the Indians for irrigation within the next twelve months. It is calculated that each farmer will have a farm of about 10 acres of irrigated land—possibly a little more than 10 acres—and there is besides this an indifferent but rather large grazing commons on which their very hardy animals can eke out a subsistence.

The complete details of the agreement, when some matters still under discussion have been fully worked out, will be presented in the next annual report of the Commissioner of Indian Affairs.

TO HON. MERRILL E. GATES,  
*Secretary Board of Indian Commissioners,*  
 Washington, D. C.

#### **REQUEST OF STANDING ROCK SIOUX INDIANS FOR ADDITIONAL STOCK CATTLE.**

Statistics compiled by the secretary of this board after full correspondence with all the Indian agents in the service regarding those Indian reservations in which stock raising rather than agriculture must be the chief reliance of the Indians for self-support, were published in tabulated form in our annual report for 1902 (opposite p. 18). We believe that wise encouragement should steadily be given by the Department to the breeding and the care of cattle by Indians whose reservations are chiefly grazing lands and whose habits of life, since they have begun to seek to be self-supporting, have tended to fit them for the work of raising and caring for stock cattle. The Sioux Indians of the Standing Rock Agency, having just released to whites large portions of their reservation for grazing purposes, have now requested the Government that two-thirds of the fund heretofore expended for "irregular labor in lieu of rations" be hereafter used for the purchase of stock cattle to increase the herds of Indians. They have also expressed the wish that a portion of the principal of the three-million trust fund which is due to the Sioux Indians be expended in purchasing stock cattle. It is to be hoped that these wishes of the Standing Rock Sioux may receive careful consideration by the Department and by Congress. It seems to us that they might well be granted.

#### **DAY SCHOOLS AMONG THE NAVAHO.**

No new boarding schools for Indian children are needed, with the possible exception of schools among the Navaho Indians. While a beginning for boarding schools for the Navaho has been made, but

little has been done for them in the way of providing day schools. The latest report of the number of Navaho Indians indicates something like 28,000 of these people, although no accurate census has been taken. We trust that during the coming year a considerable number of day schools may be established among them at points where little groups of families are together for several months of the year. The nomadic habits of these shepherd people have made the problem of reaching their children by schools a difficult one; but it should now be dealt with, although the conditions are such as to make it probable that many small day schools, with sessions covering but a comparatively small part of the year, may be found the only feasible plan in beginning this school work.

**IN OPENING RESERVATIONS BY SALE OF SURPLUS TRIBAL LAND,  
THE GOVERNMENT IS UNDER OBLIGATION TO SECURE TO THE  
INDIANS THE ADVANTAGE OF THE BEST POSSIBLE PRICES.**

In the mass of legislation and legal decisions affecting Indian tribal lands and Indian allotments which the last six years have witnessed, the decision of the Federal Supreme Court in the "Lone Wolf case," four years ago, taking the ground that Congress has supreme power to dispose of Indian tribal lands by legislation, even if such legislation sets aside explicit provisions of those treaties with Indian tribes by which Indian reservations were created, has been perhaps the farthest reaching. However carefully the terms of the court's decision might state the limiting conditions attendant on the use of this power by Congress, it was inevitable that the enunciation by the Supreme Court of this legislative power to dispose of tribal lands without the consent of the tribe should be regarded by certain unscrupulous men as opening the way to easy appropriation by white men of all surplus tribal lands and the payment of merely nominal prices for such land to the Indians. Indian "claim lawyers" have for years obtained such extravagant fees out of Indian tribal funds, and aggression upon Indian tribal lands was for so many years practiced by whites without penalty that it has been difficult to convince a certain class of clamorous white men who covet Indian lands that the "Lone Wolf decision" is not to be made a mere instrument for wresting Indian lands from Indians at nominal prices to build up fortunes for white men who can get the first opportunity to buy these Indian lands at farcically low prices. But there were not wanting good men and true in both Houses of Congress who were determined to make it evident that Congress was acting in the spirit attributed to it by the Supreme Court in the "Lone Wolf opinion," in which that court declares: "*We must presume that Congress acted in perfect good faith in the dealings with the Indians of which complaint is made and that the legislative branch of the Government exercised its best judgment in the premises.*" Such Senators and Members of Congress have systematically held that it was the duty of the United States Government and of Congress, in exercising the authority to act for Indians as wards of the nation by disposing of their tribal property, to dispose of that property in such a way and on such terms as should guard the interests of the Indians as its wards.

Attempts have been made again and again to sell hundreds of thousands of acres of surplus tribal lands at a merely nominal price per acre, offering the Indians only \$1 or \$1.25 an acre, where similar lands in the immediate neighborhood were selling at from five to twenty times the price thus offered to the Indians. When over half a million acres of Kiowa lands in Oklahoma were to be sold, in 1906, it was through the efforts of the present Commissioner of Indian Affairs, of the Secretary of the Interior, and of the type of public-spirited and high-minded legislator in Congress referred to above that the act was passed which required that these lands be disposed of "under sealed bids or at public auction" and at not less than \$5 per acre. It appears, now that the business connected with the Kiowa land sale under the sealed-bid plan is settled, that the average price secured for the most of the land is over \$12 per acre. When the pressure which was brought to bear to convince Members of Congress that these lands should be bought from the Indians for from \$1 to \$3 per acre is remembered this becomes a very striking illustration of the strong tendency to "plunder" Indians by means of the sale of their surplus lands.

In the case of the lands of the Rosebud band of Sioux Indians (nearly three-quarters of a million of acres of lands in Tripp County, S. Dak.) efforts of the same kind have been made and are still making to fix upon these lands by law a price which is believed by wise friends of the Indians to be very much below the market value of the lands. It is to be hoped that the plan proposed by the business committee of the Rosebud Indians (requiring that in any act which may provide for the sale of this land provisions shall be inserted which will secure to the Indians the benefit of competition among the prospective purchasers) will be adopted by Congress and successfully carried out by the Department. Certain of the bills now pending in Congress expressly disclaim, on the part of the United States Government, all pecuniary interest in the exercise by legislation of that right of preemption which belongs to the Government when the tribal hold upon the land is relinquished. Some of these bills expressly state that it is the wish of the United States Government to act "as trustee only" in making these sales.

Certainly the standard which the sense of equity in the heart of the American people requires of the Government at Washington when it thus acts as trustee for Indian wards makes it obligatory upon Congress to use every precaution to secure for its wards the best prices for this surplus land which sealed bids and active competition among prospective purchasers can secure for the Indians. The tendency to tamper with ethical standards of trusteeship in such legislation, while it is unjust to the Indians, entails upon the whites in Congress and throughout the country an infinitely heavier loss in the degradation of moral standards and of the sense of public honor.

#### **NEEDS OF INDIAN TRIBES IN ALASKA—SUFFERING FOR LACK OF HOSPITALS—GREAT NEED OF SCHOOLS.**

Two years ago Alaska, with a population of perhaps 30,000 of the native races, had but 32 Government schools, with but 35 poorly paid teachers. During the last year less than 50 day schools were pro-



vided. There are no boarding schools or schools for industrial training for the natives. Diseases induced by contact with the whites have resulted in an awful death rate. Half the natives near the mouth of the Kuskokwim River (some 1,500 out of about 3,000) died in 1900 of an epidemic of measles and grippe. The food supply of the natives north of the Yukon, and inland from the coast, consists almost exclusively of the salmon which run up the rivers. The great salmon canning factories have nearly destroyed the Indians' food supply, so far as the Indians south of the Yukon are concerned; and they are already threatening the rivers north of the Yukon. We believe that provision should be made by law against the establishment of any canning factories on rivers north of the Yukon. The supply of salmon on rivers south of the Yukon, if properly handled by the canning factories, is more than sufficient to supply the demand of the world for canned salmon. Common humanity demands action on the part of Congress to prevent the utter cutting off of the food supply of the natives north of the Yukon.

The suffering among these Alaskan natives for lack of medical and surgical advice and hospital relief is indescribable. Is it not the manifest duty of the United States Government to begin at once to establish boarding schools, with a hospital attached to every school, at points along the coast to which Indian children may be brought for education and trained in practical industries which will aid them in self-support? From such school hospitals some medical and surgical advice and help should be given to the adult natives.

We believe, too, that there should be far more of activity and a far larger expenditure of money in establishing day schools (where elementary industrial training should be given) throughout Alaska.

We are strongly of the opinion that wise action has been taken in continuing to keep the reindeer under the direction of the United States Commissioner of Education and the General Agent of education for Alaska, instead of turning them over to the white residents of that Territory. The reindeer were imported as a measure of relief for the native Alaskans. The Indians should not be deprived of the reindeer, now that the herd of reindeer begin to promise material relief and a means of support for numbers of the natives.

It seems to us that the entire educational work of Alaska would probably be more effectively done if all the educational activities of the Territory were unified in plan and in administration. This work should be supported by larger appropriations.

**THE BURKE BILL OF MAY, 1906, SHUTTING OUT OF UNITED STATES CITIZENSHIP FOR TWENTY-FIVE YEARS ALL INDIANS ALLOTTED LAND AFTER MAY 8, 1906, EXCEPT AS THE DEPARTMENT MAY ALLOW INDIVIDUAL INDIANS TO BECOME CITIZENS, SEEMS A LONG STEP BACKWARD—AGAINST MAKING CITIZENS OF INDIANS AND IN FAVOR OF EXCLUSIVE DEPARTMENTAL CONTROL.**

The central idea of the "Dawes bill," known as the "general allotment act of 1887," is that the allotment of land in severalty shall make a United States citizen of the Indian who is thus separated from tribal life and established on his own land. To save him from the land grabbers and to give him a start in industry the United

States protects him in the possession of his land by giving him a trust deed making the land inalienable and nontaxable for a period of twenty-five years from the time of allotment. At the expiration of the twenty-five years the United States gives to the allottee or to his surviving heirs a patent to the allotment in fee simple.

In 1906 a bill introduced by Mr. Burke, of South Dakota, was passed, by which it is provided that an allotment of land to an Indian made after May 8, 1906, does not carry citizenship with it as heretofore, and that only such Indians as may be individually adjudged by the Secretary of the Interior to be capable of managing their own affairs can have citizenship until twenty-five years shall have passed after the allotment of their land, while so long as these allotments are held in trust by the Government the allotted Indian, not a citizen, continues to be subject to the exclusive jurisdiction of the United States and under regulations of the Secretary of the Interior and the Indian Bureau.

While we do not question the good intentions of those who favored this legislation, it seems to us that this measure threatens most seriously the progress of Indians toward citizenship and independent, self-supporting life as American citizens. It throws the presumption *against* citizenship for allotted Indians. No Indian to whom land is allotted can become a citizen in less than twenty-five years unless the Secretary of the Interior may choose to allow him to become a citizen. It is impossible for the Secretary or for the Commissioner of Indian Affairs, of course, to get knowledge at first hand as to the fitness of Indian allottees for citizenship. The plan provided in the Burke bill seems to this Board, after many years of observation of the dealings of the Indian Bureau with Indians, to be fraught with most serious danger. It substitutes arbitrary personal action by officials for the rule of the law. It creates a presumption that the allotted Indian is not to be a citizen of the United States. It throws upon every Indian the burden of attracting to himself sufficient attention, and of winning for himself from his agent or superintendent sufficient favor, to secure such representations in his behalf to the Department and the Indian Bureau as shall lead to exceptional action in his favor in admitting him to citizenship.

We hope that this provision of the Burke allotment act may be amended at the next session of Congress. We respectfully suggest that in our opinion the proper kind of amendment would be legislation which should provide that (if not on the day of the issuance of the trust deed to an allottee, certainly after a *brief probation period* of not more than two or three years) every allotted Indian should become a citizen, unless by reason of *incompetence, laziness, intemperance, or crime* he or she should be individually adjudged unworthy as yet of citizenship. We believe that such legislation might well provide the method by which *unfitness* for citizenship should be tested and proved. It seems to us that instead of citizenship being granted as a personal favor by the Secretary of the Interior to Indians whom he may designate, it is far more consonant with the spirit of the American system into which we propose to receive these Indians as citizens that citizenship should come by virtue of the allotting act to all Indians who are fit to receive it, and that those who are *not fitted to receive citizenship* with the allotment of their land should be *ad-*

*judged unfit* by the application of tests such as can be easily defined in a law governing such cases. If Indians who are for any good reason adjudged unfit to become citizens are excluded, we believe that citizenship will become, as it ought to be, a prize to be sought by the Indians. Citizenship should come with the allotment of land at the time of allotment or within a year of it to all those allotted Indians who can not be properly classed for specific reasons as *unfit for citizenship*. In other words, we believe in the man-making effect of citizenship upon Indians too long kept in leading strings.

We respectfully commend to the Department, to the Indian Bureau, and to Congress the consideration of some such amendment to the Burke bill. The hopeful progress which the Indians have made in education and in fitting themselves for self-support and citizenship during the last twenty-five years we believe is in no slight degree due to the new hopes which have sprung up among the Indians since the Dawes severalty bill has given them the prospect of early admission to American citizenship. It seems to us a serious mistake to deprive them as a people of this hope, or to make citizenship for an Indian depend upon his keeping on the pleasant side of the local officials at the agency in order to secure recommendation for citizenship.

#### INDIAN TERRITORY IN THE NEW STATE OF OKLAHOMA—SCHOOLS AND TAXES.

For the last ten years the Indian Territory has been the place where legislation and changes in administration have had the most marked effect upon the entire Indian problem. The rapid increase of white population in the Indian Territory and Oklahoma, the gradual breaking up of the old tribal governments, and the assumption by the United States Government of the control of Territorial affairs, with the popular agitation for and against statehood, have all contributed to make these last years in the Indian Territory critical years in their effect upon the future of the native American races.

Four years ago Congress passed an act by which the tribal governments of the Five Civilized Tribes were to cease. This would have involved the discontinuance of all tribal schools, thus leaving the whole of the Indian Territory outside the incorporated towns entirely without even the most rudimentary provisions for a system of public schools. About three years ago, in a conference between friends of the Indians who were residents of the Indian Territory and members of this Board, the first provision was drafted for increasing the efficiency of the Indian tribal schools by opening them to white students through the help of an appropriation by Congress to be used for this purpose. This provision became law, and the continued and enlarged support thus secured for these tribal schools was accompanied by a systematic increase in their number and by the definite purpose on the part of residents of the Territory to send white pupils to the rural schools thus established and enlarged, to help to pay for the support of these schools, and to make them the basis of a State country school system. It is with very great gratification that this board has watched the development of this germ of a country school system for the Indian Territory in the new State. The incorporated towns in the Indian Territory and in Oklahoma



have established and are supporting and enlarging admirable systems of town grammar schools and high schools. The new State will receive from Oklahoma a gift of school lands which are estimated as worth \$20,000,000, and an annual income for school purposes which amounted to a half million dollars last year and will be much larger when these lands produce full revenue. In the enabling act for the creation of the new State, Congress has provided a school fund of \$5,000,000 (in addition to the lands received from Oklahoma) in recognition of the fact that in the Indian Territory no public lands had been set aside for school purposes.

In population the two parts of the New State, Indian Territory and (the old Territory of) Oklahoma, are about equal, and while the area of old Oklahoma is somewhat greater, the average value per acre of the Indian Territory is greater than the average in old Oklahoma. Even with the special school fund of \$5,000,000 established by Congress in the enabling act as a contribution from Indian Territory toward the school funds of the new State, it is evident that of the money available for school purposes in the new State it will be felt that Oklahoma is contributing four or five dollars, to one dollar from the Indian Territory.

This situation is rendered still more unfavorable for country schools in Indian Territory by the fact that even if the legislation now pending in Congress to remove restrictions from considerable portions of allotted lands should pass, it will remain a fact that *something over half the entire land of the Indian Territory will be exempt from taxation for the next twenty-five years*. It is evident that the making of anything like adequate provisions for the maintenance of rural schools throughout the Indian Territory will thus be rendered exceedingly difficult. The Indian Territory has a larger population of white children of school age who are growing up absolutely without any system of schools than has ever been known in any State or Territory in the history of the United States. This fact renders the problem still more serious.

We note with great satisfaction the more liberal appropriation which, in view of these facts, Congress has this winter made (\$300,000) "for the enlargement and increased efficiency of the old tribal schools" in the Indian Territory. This appropriation, efficiently administered, as it has been under the direction of the Secretary of the Interior, will be most helpful in bridging over the transition years from territorial to state government.

But even if Congress were to contemplate continuing such an appropriation for a series of years and increasing it in amount, the difficulty would not then be fully met. We wish respectfully to commend to Congress, to the Department of the Interior, and to the President the question whether this is not the appropriate time for meeting, by a definite appropriation (whether from the coal and oil lands or from other sources), the lack of such funds for school and court purposes as are furnished by land taxes in all other States and Territories. Such funds are totally lacking in those townships and counties where Indian allotments keep the land untaxed, and so, for purposes of local government and school support, *nonproductive*.

In parts of other States and Territories (notably in Thurston County, Nebr.) the great difficulty of securing for Indian children

school privileges and for Indian citizens adequate protection under the law has come to be of intense practical importance. It has been openly said in the local newspapers, and sometimes in semiofficial correspondence from Thurston County, that where the lands of Indians were not taxed it was unreasonable to expect that the county would incur for the protection of Indians expensive litigation, or would make adequate school provision for Indian children. In the part of Oklahoma which was formerly Indian Territory, and outside of incorporated towns, this practical difficulty of a lack of revenue from land taxation threatens the very existence of schools. *We respectfully call upon Congress to meet, by the provision of an adequate income for school purposes from some regular source, the difficulties which must inevitably be met by the inhabitants of these counties where most of the land is untaxable Indian allotments.*

Several measures of legislation have been suggested looking to the retaining by the General Government of the mining interests of coal and asphalt in the Indian lands of the new State, while surface agricultural rights are to be leased or sold to settlers and the proceeds of such leases or sales are to be paid to the Indians. If any one of these plans is adopted (for instance, the plan which proposes that the United States Government retain control of the mining interests in coal and asphalt and from the proceeds of mining leases retain in the United States Treasury 25 per cent to defray the expenses of administration, paying over the remaining 75 per cent for the benefit of the new State), why would it not be wise and practicable for Congress to enact a provision that this 75 per cent should constitute a school fund for the new State, and that from this school fund there should, first of all, be paid, for the benefit of the rural schools in those portions of the State which were formerly Indian reservations and where most of the land is now held untaxed for twenty-one years as the holdings of Indians, an annual amount which should be as nearly as possible equivalent to what would be the net proceeds from the annual taxation for school purposes of land which is now held untaxed, in trust, for Indian owners? Such a plan seems to us practicable. We believe that it would commend itself to the people of the new State of Oklahoma and to the citizens of the country at large.

**FOR RURAL SCHOOLS IN THE INDIAN TERRITORY—OLD TRIBAL SCHOOL PROPERTY SHOULD BE SOLD FOR SCHOOL PURPOSES.**

In this connection we wish respectfully to suggest to the Department and to Congress the question whether it would not be wise to provide by law for the selling of the various tribal school properties (when their present use for tribal schools is discontinued) in such a way as to make it possible to use these old school properties for school purposes and for the advantage of the school system of the new State. It is believed that many of these school properties in the towns, as well as in the rural districts, could and should be *made at once available for school purposes, and perhaps, in certain instances, for reformatory school purposes*, and should not be sold by auction to individual bidders merely for the sake of the petty profit which might be made by the breaking up and selling of these properties to private persons.

**PROHIBITION OF LIQUOR TRAFFIC IN INDIAN TERRITORY.**

It is most gratifying to all friends of the Indians and to all true-hearted American citizens to note the progress which has been made in securing effective safeguards against the liquor traffic in the State of Oklahoma. The agreements of the United States Government with the Indian tribes promised explicitly the prevention of the liquor traffic in all the land which was set apart for Indian uses and is known as the Indian Territory. At our annual meeting two years ago special resolutions of this board were sent to the Senate and the House of Representatives, and were cited and used in the discussion regarding the enabling act for the new State of Oklahoma by legislators who felt that prohibition should be secured in the new State.

Many friends of temperance legislation wished that the enabling act should prohibit the liquor traffic throughout all the territory of the new joint State. But it was deemed best by Congress to make the restrictions of the enabling act apply only to those portions of the territory of the new State of Oklahoma which had been set apart as Indian reservations. For these parts of the territory of the new State, the terms of the restriction in the enabling act were the most stringent which had been suggested by the strongest friends of temperance.

It is exceedingly gratifying to note the heartiness with which the constitutional convention of Oklahoma, now in session at Guthrie, has welcomed these prohibitory provisions in the enabling act. They have accepted the restrictions of the enabling act as binding for the full period of twenty-one years. Beside this, they have made provisions for submitting to the voters of all the counties and districts throughout the entire State (old Oklahoma as well as old Indian Territory) the question whether these prohibitory provisions shall be binding for the entire State and not simply for those portions of the State covered by the old Indian reservations. It is hoped that the popular desire for a uniform State constitution will prove strong enough, and that the public opinion of the population of the State will be sufficiently intelligent in its view of the evils of the liquor traffic, to secure the adoption of this prohibitory provision for the entire State.

Even if this should not be the case, friends of local option have suggested in the State convention that to the voters of each county and district the question of the extension of these restrictions over their own county and their own district should be submitted, to be decided by the local vote.

The evils of the liquor traffic bear with exceptional severity upon the Indian population. It is gratifying to know that there is a prospect of such safeguards as can be established by law in the new State of Oklahoma.

**MEETINGS OF THE BOARD.**

In addition to the conferences of members of the board with the Commissioner of Indian Affairs at the opening of samples and the awards of contracts, the board held its usual autumn meeting, at Lake Mohonk, in October, 1906, as the guests of Commissioner



Albert K. Smiley, for a three days' conference with friends of the Indian from all parts of the country.

From February 26 to February 28, 1907, the board held its annual meeting at Washington, D. C., for two sessions daily, transacting the usual business of the annual meeting and welcoming two new members of the board, Prof. Maurice Francis Egan, of Washington, D. C., appointed and commissioned by the President of the United States on October 5, 1906, to fill the vacancy occasioned by the resignation of Hon. Charles J. Bonaparte, now Attorney-General of the United States; and Hon. George Vaux, jr., of Philadelphia, appointed and commissioned by the President of the United States on November 27, 1906, to fill the vacancy caused by the death of Hon. Philip C. Garrett, of Philadelphia.

The annual report herewith submitted was considered, acted upon, and approved by the Board, and, in accordance with a resolution of the Board, is herewith submitted to the Secretary of the Interior.

Very respectfully,

DARWIN R. JAMES, *Chairman.*  
MERRILL E. GATES, *Secretary.*  
ALBERT K. SMILEY  
E. WHITTLESEY  
WILLIAM D. WALKER  
JOSEPH T. JACOBS  
PATRICK J. RYAN  
ANDREW S. DRAPER  
GEORGE VAUX, Jr.  
MAURICE F. EGAN.

To the SECRETARY OF THE INTERIOR.

## APPENDIX.

### REPORT OF THE PURCHASING COMMITTEE OF THE BOARD OF INDIAN COMMISSIONERS.

WASHINGTON, D. C., *February 12, 1907.*

SIR: The purchasing committee of this board has the honor to make the following report of business during the year from January to December, 1906:

For several successive years this board has advocated in its annual report and in recommendations to the Secretary of the Interior and to the Commissioner of Indian Affairs that a change be made in the place and manner of opening bids and awarding contracts for supplies for the Indian Service by which the Government might be spared expenditures of time and money which seemed to us needless in the duplication of machinery for opening and classifying bids at widely different points. It is with great satisfaction that we have witnessed during this past year the change made by the present Commissioner of Indian Affairs by which bids have been opened and classified at the Indian Office in Washington. Although the samples (which are submitted simultaneously with the bids) are delivered at the respective Indian warehouses as in the past, we believe that this change has proved in every way beneficial to the service. Your purchasing committee would respectfully renew the suggestion offered in past years that for the same reasons which have led to a change in the place of opening the bids there should also be a change by which most of the work of examining samples and making awards should be done at a central warehouse at Washington. We further believe that not more than two Indian warehouses are necessary for the welfare of the service.

On Thursday, April 5, 1906, at 2 p. m., bids for clothing, piece goods, etc., were opened at the office of the Commissioner of Indian Affairs. Commissioner Gates, member and secretary of this board and member of the purchasing committee, was present and assisted. Twenty-five bids were opened, and all were read in full by Commissioner Leupp in the presence of the few bidders who were in attendance.

On April 12, 1906, bids for blankets, dry goods, cotton goods, and notions were opened; also bids for hats and caps. On Thursday, April 26, at 2 p. m., bids for boots, shoes, rubber goods, medical supplies, and hardware were opened at the office of the Indian Bureau by Acting Commissioner Larrabee. Commissioner Gates, of this board, was in attendance and assisted. Opportunity was given for the reading in full of every bid, and where anyone who was present asked for it bids were read in full. On Tuesday, May 14, at 2 p. m., bids for crockery, harness, leather, etc., were opened by Commissioner Leupp at the Indian Office, Commissioner Gates, of this board, attending and assisting. On Tuesday, May 8, bids for rolled barley, gross beef, net beef, corn, salt, bacon, beans, lard, coffee, tea, sugar, soap, baking powder, and other groceries were opened by Acting Commissioner Larrabee. Commissioner Gates, of this board, was present and assisted. About 200 bids were opened.

Your committee looks forward with interest to the testing of the plan of the present Commissioner of Indian Affairs for deferring the opening of bids for corn meal, cracked wheat, hominy, ground feed, flour, oats, dried apples, peaches, prunes, and canned tomatoes until early autumn, with the expectation of thus securing products of the current season instead of "hold-over" supplies. The change seems to us to be a wise one, promising well for the service. The earlier date fixed this year for opening bids and awarding contracts in the matter of clothing, etc., in order to secure the forwarding of all blankets, clothing, etc., needed for winter use early in the autumn, that these supplies may not fail to reach the Indians before cold weather sets in, we heartily approve. Attention has been called in our past reports to lamentable cases where winter supplies were held up on the road until spring, and the Indians suffered greatly as a result of this needless delay.

On Wednesday, April 18, and the succeeding days, the Commissioner of Indian Affairs examined samples and made awards of contracts for clothing and for hats and caps at the United States Indian warehouse in New York City. Commissioner Gates, of this board, assisted in the examination of samples and in the awarding of contracts. On Wednesday, the 25th of April, examination of samples and awards of contracts in dry goods, notions, etc., were made at the

warehouse in New York by the Commissioner of Indian Affairs. Commissioner Darwin R. James, chairman of this board and of this purchasing committee, was in attendance and consulted with the Commissioner of Indian Affairs with reference to these awards.

On Monday, May 14, Commissioner Leupp, assisted by Commissioner Gates of this board, began the examination of samples and the award of contracts at the St. Louis warehouse. Commissioner Gates was in attendance from the morning of May 14 until the afternoon of Thursday, April 17, when the awarding of contracts at St. Louis was substantially completed. On the 18th and 19th of May Commissioner Gates was in attendance at the Indian warehouse in Chicago at what was substantially the completion of the awarding of contracts at that warehouse.

Your committee in reporting wish to express their gratification at the intelligent and persistent efforts made by the present Commissioner of Indian Affairs to meet the real needs of the Indian Service by the changes made in schedules and specifications, and by the care taken to bring to bear (upon the specifications and upon the examination of samples) the experience not only of experts upon the value of goods, but also of men and women in the Indian Service who are able to pass intelligently upon the fitness of the supplies to meet the needs and (wherever it is wise to defer to the taste and the preferences of the Indians) to meet the preferences and choices of the Indians as well.

### BUSINESS DONE AT THE UNITED STATES WAREHOUSES.

Mr. Frank Sorensen, superintendent of the United States Indian warehouse at 265 and 267 South Canal street, Chicago, under date of January 14, 1907, writes to the secretary of the board of Indian commissioners as follows:

SIR: I inclose herewith lists showing total amount of goods handled by this warehouse during the calendar year 1906; also list of inspectors employed here during that time.

Very respectfully,

FRANK SORENSEN, *Superintendent.*

*Shipments handled by Chicago warehouse from January 1 to June 30, 1906, inclusive, since last report.*

From—	Number of packages.	Weight.	Amount.
Chicago, Ill.....	5,235	729,363	\$43,775.54
St. Paul, Minn.....	927	125,453	3,679.67
Kansas City, Mo.....	304	54,387	525.35
Omaha, Nebr.....	6	258	25.00
St. Louis, Mo.....	5	789	25.73
Waynesboro, Pa.....	4	3,951	395.00
Albuquerque, N. Mex.....	14	1,972	31.49
Quincy, Ill.....	1	14	1.10
Forwarded by mail.....	39	106	150.89
Total.....	6,535	916,293	48,609.68

### FROM JULY 1 TO DECEMBER 31, 1906, INCLUSIVE.

Chicago, Ill.....	52,262	7,705,176	\$358,787.10
St. Paul, Minn.....	2,344	201,911	4,792.97
San Francisco, Cal.....	706	352,499	17,331.65
Duluth, Minn.....	357	56,567	447.33
St. Louis, Mo.....	152	37,709	1,403.96
Kansas City, Mo.....	63	6,696	297.56
Omaha, Nebr.....	3	1,331	54.72
Burlington, Iowa.....	5	795	36.50
Minneapolis, Minn.....	8	785	45.80
Peoria, Ill.....	64	8,284	268.51
Forwarded by mail.....	355	674	488.92
Total.....	56,319	8,372,427	383,955.02
Total January 1 to June 30.....	6,535	916,293	48,609.68
Total July 1 to December 31.....	56,319	8,372,427	383,955.02
Grand total.....	62,854	9,288,720	432,564.70

### TOTAL FROM JANUARY 1 TO DECEMBER 31, 1906.

Number of packages.....	62,854
Weight.....	9,288,720
Amount.....	\$432,564.70



*Inspectors employed at the Chicago warehouse during calendar year 1906.*

Name of inspector.	Articles inspected.	Days on duty.	Year of service.
Henry W. Dudley .....	Coffee, beans, sugar, rice, groceries, etc.....	35	Eighth.
Thomas Robertson .....	Tea .....	4	Do.
Prof. J. H. Long .....	Baking powder, soap, cream of tartar, drugs, etc.....	68	Do.
Wilhelm Bodeman .....	Medical supplies .....	22	Ninth.
R. H. Whittemore .....	Crockery, lamps, etc .....	21	Fourth.
Geo. E. Watson .....	Paints, oils, etc .....	45	Eighth.
James R. Jensen, from Indian Office at Washington, D. C. ....	Classes 10, 12, 13, 15, 16, and 17.....	(a)	Second.
M. I. Zeigler, from Carlisle School, Pa. ....	Class 11 and leather belting .....	(b)	Do.
H. S. Shepherd .....	Bacon, mess pork, and lard .....	17	Seventh.
John J. Ryan .....	Dry goods and notions .....	37	First.
David Hewey, from Leech Lake Agency. ....	Boots and shoes .....	(c)	Second.
C. H. Reeves .....	Zinc, tin, etc.....	1	First.
Ephraim Hewitt .....	Flour .....	100	Fourth.

<sup>a</sup> From July 2 to November 15, inclusive.

<sup>b</sup> From May 14 to 18, from October 19 to November 1, and from December 6 to 13.

<sup>c</sup> From August 20 to November 22, inclusive (time divided between Chicago and St. Louis).

Supt. William H. Blake, of the United States Indian warehouse at 602 South Seventh street, St. Louis, Mo., writes under date of January 14, 1907, as follows:

"DEAR SIR: In reply to your letter of the 9th instant, relative to the record of work done at the St. Louis Indian warehouse during the calendar year 1906, I have the honor to submit the following statement:

## STATEMENT OF ST. LOUIS WAREHOUSE.

Bids submitted in April.....	59
Contracts awarded in May.....	41
Open-market proposals accepted.....	174
Packages shipped by freight.....	14, 769
Packages shipped by mail.....	218
Weight of goods shipped by freight.....pounds..	1, 554, 227
Weight of goods shipped by mail.....do.....	549

Name of inspector.	Class of goods.	Number of years.	Number of days.
Wm. Bodeman .....	Medical supplies .....	5	9
Wm. H. Hahn .....	Hardware .....	3	46
Lendrum Johnston.....	Dry goods .....	2	13
David Hewey.....	Shoes .....	2	(a)

<sup>a</sup> Paid by month; made no report of the number of days.

"Very respectfully,

"WILLIAM H. BLAKE,  
"Superintendent."

## STATEMENT OF OMAHA WAREHOUSE.

R. C. Jordan, superintendent of the United States Indian warehouse at Omaha, Nebr., under date of January 21, 1907, submits the following report covering the calendar year 1906:

Number of packages shipped.....	22, 215
Supplies shipped.....pounds..	2, 342, 883

Inspectors.	Articles inspected.	Year of service.
Prof. John H. Long.....	Soap, drugs .....	Eighth.
R. C. Jordan .....	Bacon, sugar, rice, oatmeal, hardware, mattresses, hard bread, lard, corn meal, hominy.....	Sixth.
William O. Thomas .....	Medical supplies .....	Fourth.

Prof. John H. Long, seven days' work.

Services of R. C. Jordan and W. O. Thomas as inspectors were performed without additional cost to the Government.

Very respectfully,

R. C. JORDAN, *Superintendent.*

Superintendent E. F. Merwin, in charge of the Indian warehouse Nos. 119 and 121 Wooster street, New York City, under date of January 18, 1907, writes as follows:

## STATEMENT OF NEW YORK WAREHOUSE.

SIR: During the calendar year 1906 there was moved through this warehouse to destination 19,810 packages, weighing 2,558,958 pounds, under 42 contracts, selected and awarded from 68 bids, which this year were opened in Washington.

Mr. Griffin, in this, his ninth year as inspector of clothing, occupied thirty-eight days.

Mr. E. Jellene, in this, his second year as inspector of dry goods and notions, occupied forty-three days.

Mr. Arthur Sutorius, in this, his first year as inspector of hats and caps, occupied eighteen days.

Mr. E. C. Kirkland, in this, his first year as inspector of coffee, occupied three days.

Mr. Benj. H. McClain, in this, his first year as inspector of hardware, occupied one day.

Sugar, sirup, wagon covers, and other miscellaneous articles were inspected by the superintendent.

You will observe a very large increase of business in this warehouse, which was accomplished with a large percentage of decrease in expense, as, for instance, in 1905 we handled 6,037 packages, against 19,810 in 1906, and in 1905 724,938 pounds, against 2,558,958 pounds in 1906, an increase of several hundred per cent in business at no appreciable increase in expense. As our cartage contract was made for 25 cents per ton less for 1906-7, you will see that it is a very large item, and the clerical force in the warehouse was less than 1905.

I might add, though not asked for, that the quality of goods which have been furnished to the Indians in 1906 was superior to that of 1905, and, as I believe, very much superior to that furnished in previous years, particularly in dry goods, and though at a slight advance in cost will prove a real economy in the added service of the goods.

Very respectfully, yours,

E. F. MERWIN,  
*Superintendent.*

All of which is respectfully submitted to the board, and through them to the Secretary of the Interior, as the report of your purchasing committee.

MERRILL E. GATES,  
*Pro tempore Chairman of Purchasing Committee.*

# MEMBERS OF THE BOARD OF INDIAN COMMISSIONERS, WITH THEIR POST-OFFICE ADDRESSES.

DARWIN R. JAMES, chairman	384 Washington street, New York City.
MERRILL E. GATES, secretary	Room 320, Corcoran Building, Washington, D. C.
ALBERT K. SMILEY	Mohonk Lake, Ulster County, N. Y.
E. WHITTLESEY	8 Iowa circle, Washington, D. C.
WILLIAM D. WALKER	367 Elmwood avenue, Buffalo, N. Y.
JOSEPH T. JACOBS	1106 Majestic Building, Detroit, Mich.
PATRICK J. RYAN	Philadelphia, Pa.
ANDREW S. DRAPER	Office Commissioner of Education, Albany, N. Y.
GEORGE VAUX, Jr	404 Girard Building, Philadelphia, Pa.
MAURICE F. EGAN	2308 Nineteenth street, Washington, D. C.

## SECRETARIES OF MISSIONARY SOCIETIES ENGAGED IN EDUCATIONAL WORK AMONG THE INDIANS.

(American) Baptist Home Mission Society: Rev. H. L. Morehouse, D. D., 312 Fourth avenue, New York City.

Baptist (Southern): Rev. B. D. Gray, D. D., 724 Austell Building, Atlanta, Ga.

Catholic (Roman) Bureau of Indian Missions: Rev. William H. Ketcham, 1326 New York avenue, Washington, D. C.

(Congregational) American Missionary Association: Rev. A. F. Beard, D. D., 287 Fourth avenue, New York City.

Episcopal Church Mission: Rev. A. S. Lloyd, D. D., 281 Fourth avenue, New York City.

Friends' Yearly Meeting: Joseph J. Janney, Eutaw and Madison streets, Baltimore, Md.

(Friends' Orthodox) Associated Executive Committee of Friends on Indian Affairs: E. M. Wistar, 704 Provident Building, Philadelphia, Pa.

Methodist Missionary Society: Rev. H. K. Carroll, D. D., 150 Fifth avenue, New York City.

Methodist Episcopal Church (Southern): Rev. W. R. Lembuth, 810 Broadway, Nashville, Tenn.

Mennonite Mission: Rev. A. B. Shelly, Quakerstown, Pa.

(Moravian Mission) The Society for Propagating the Gospel: Rev. Paul de Schweinitz, 20 Church street, Bethlehem, Pa.

Presbyterian Board Home Missions: Rev. Robert M. Craig, 156 Fifth avenue, New York City.

Presbyterian (Southern) General Assembly's Home Missions: Rev. S. L. Morris, Atlanta, Ga.



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